THE LOUISIANA ECONOMIC

OUTLOOK: 2018 AND 2019

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Published by:
Economics & Policy Research Group
E. J. Ourso College of Business
Louisiana State University
Baton Rouge, LA

October, 2017
ACKNOWLEDGEMENTS

This page is easy to write for many producers of state-level forecasts. They sit in an office, look at the employment data, generate some charts, and then let the computer speak. At the opposite extreme is the Louisiana Economic Outlook. Hundreds of persons provide input to the LEO. The tricky thing is figuring out how to adequately express your gratitude.

The LEO could not be produced at all without the financial support of our sponsors. Our Gold Donor and printer of the LEO---Blue Cross Blue Shield of Louisiana---has been a reliable partner for years, as has been Gold Sponsor Cleco. Luckily for us, HomeBank is now in its third year as a Gold sponsor, and ExxonMobil’s Silver Sponsorship remains vital to our work. Sponsorship monies not only support the LEO, but also help with travel monies, software purchases, and data acquisitions for the Economic Department at LSU. We cannot over-state the value of your support in this “fiscal cliff” environment.

When the most intense data gathering begins in August, it is reassuring to know that the economic development community across the state stands ready to eagerly pitch in with the latest happenings in their region. Support starts at the top with the state’s chief economic developer---Secretary Don Pierson---who not only makes his staff available, but also provides valuable input to early drafts of the report. In the LDED office, Larry Collins---executive Director of International Commerce---spent hours reviewing industrial announcement lists to insure we captured all the good news in the state. Speaking of industrial announcement lists, an excellent relationship with Connie Fabre at the GBRIA helps us stay current. Crucial data came in from all regions from folks like Michael Hecht, Sayde Finkel, Adam Knapp, Jon Grafton, Greg Gothreaux, George Swift, Rick Ranson, Eric England, Brenda Levinson, Linda Prudhomme, Bob Fudickar, Stacey Neal, Lacey Toledano, Vic Lafont, Melissa Bordelon, Frank Fink, Mike Tarantino, Chett Chassion, Jeff Baudier, Larry Deroussell, Dale Logan, Lynn Hohensee, Sue Nickels, Katy LeBlanc, Rocky Rockett, Murray Viser, Liz McCain, David Bennett, and Kate McArthur. The list is long because so many in this community are eager to help. I owe a lot to you folks!

I am particularly grateful to the men and women in the business community---from small firms to the heads of Fortune 500 companies---who will take time from their jammed schedules to talk to us about their companies and the prospects for the future. There are over 100 of you who take those calls---too many to attempt to list---but please know how indebted we are to you for your input.

Two state agencies provide information and data crucial to our forecasts. Greg Albrecht in the Legislative Fiscal Office can fill a lunch meeting with tons of little-known but very useful information on state finances. Ramona Robichaux heads up the Division of Research in the Louisiana Workforce Commission, and helpfully answers call after call from us on technical details about employment data.

Our most able Managing Editor---Judy Collins---not only manages our subscription lists and printing schedule, but she also makes sure the proper word is “their” instead of “there” and “too” instead of “two” when her author is hustling to meet deadlines. Dean Richard White in
the E.J. Ourso College of Business remains a stalwart supporter of the LEO. We are lucky to have him at the helm in these difficult financial times.

Finally, there are two gentlemen who for over two decades have insured that the LEO is released with a bang. Rolfe McCollister and Julio Melara---my two favorite entrepreneurs---host an 800-peerson luncheon each year to release our publication. The professionalism of the event is indicative of the professionalism of their whole operation. Thanks guys!
SUMMARY & CONCLUSIONS

Louisiana is finally emerging from a 20-month recession due to a dramatic downturn in the state’s oil patch. Recovery will be muted by the completion of several large industrial projects and a slight delay in the startup of new ones. The good news is the recovery will be bolstered by a slightly faster growing national economy, low inflation, and only a slight increase in interest rates.

While the bloodletting has slowed in the oil patch, oil prices in the $52-$58 a barrel range means exploration in the Gulf of Mexico will only recover modestly at best. That means the oil patch will remain sluggish over 2018-19. On a more positive note, a remarkable $178.8 billion in industrial announcements have been made in the state since 2012, heavily concentrated along the Mississippi River from Baton Rouge to New Orleans and in the Lake Charles area on the Calcasieu Ship Channel and the Sabine River. Of this total, 48% are under construction or completed, and 52% are at the FEED stage. Completion of projects will noticeably slow growth rates in some of these areas.

There are nine Metropolitan Statistical Areas (MSAs) in Louisiana and 29 parishes designated “rural”. Our outlook for each is as follows:

- The New Orleans MSA is projected to be the third fastest growing MSA in the state, adding 4,600 jobs (+0.8%) in 2018 and 7,600 jobs (+1.3%) in 2019. Huge industrial projects---especially to the west in St. James Parish---will drive this growth, with 2019 being a year of new ground-breaking that will give the economy an extra kick upwards. Significant expansions in the region’s healthcare sector, construction of the new airport and expansion of the WWII Museum will further boost the MSA.

- Virtually all of the almost $16 billion in industrial projects in the Baton Rouge MSA are completed or drawing to an end. Vanishing construction jobs will lower this MSA’s super-heated growth rates over 2014-16 to a more modest 0.7% rate in 2018 and 0.9% in 2019. Offsetting the industrial construction job loss will be four major projects in the healthcare sector, the Baton Rouge Port, and the high-tech sector. Resolution of the “fiscal cliff” will likely add drag to this state-government-job-rich area.

- After almost a decade of decline, we are projecting the Shreveport-Bossier MSA will begin two years of moderate growth, adding about 1,400 jobs a year (0.8%) over 2018-19. Fueling this recovery will be a rising rig count in the Haynesville Shale, nice gains in the region’s high-tech sector, and a larger bounty of state road lettings than in the past.

- Solid performance in Lafayette’s Big Four ---Stuller Settings, Acadian Ambulance, the Schumacher Group, and LHC---will help lessen the bite from a still recessionary oil and gas extraction sector. Over a $60 million boost to the state road lettings budget in this region will help as well. If our oil price forecasts are near the mark, the Lafayette MSA will begin to add jobs in 2019 (+1,600 jobs) after experiencing another slight down year (-800 jobs) in 2018.
• A further hammering from Houma’s shipbuilding industry in 2018 will add to the continuing woes in the area’s oil and gas exploration and closely related industries in 2018, resulting in a further loss of 1,800 jobs. Additional hires at Gulf Island Fabricators, higher sustained oil prices, and a significant new LNG facility at Port Fourchon should be enough to get Houma back on a growth path (+700 jobs) in 2019.

• The Lake Charles MSA, with a remarkable $126 billion in industrial announcements since 2012 ($55.9 billion underway or completed) has been one of the fastest growing MSAs in the country for the past four years. We are projecting a pullback in the region’s 4-5% growth pace to about 1.6% in 2018 as construction of many projects comes to an end. However, in the latter part of 2018 or early 2019, we are expecting construction starts on 2-3 huge LNG projects to create a new spark of growth in 2019 (+4%).

• Between 2003 and 2011, the Monroe MSA experienced a long period of decline, but since 2012 the area has enjoyed a steady upward climb. Over 2018-19 the MSA is projected to add 800 jobs a year, finally setting new employment records in 2018. Expansions at CenturyLink, IBM, and Vantage Health Plan are leading this recovery.

• A special 2-year IT project at Cleco, expansion in hiring at Union Tank Car, and new hires at Crest Industries are expected to reverse the employment fortunes in the Alexandria MSA over 2018-19 (+300 jobs per year). Unfortunately, the plug was pulled on three big proposed projects for this region---Sundrop, Investimus Fortis, and Revolution Aluminum.

• The Hammond MSA’s record of adding about 600 jobs a year since 2015 is expected to continue over 2018 (+600 jobs) and 2019 (+400 jobs). Slight additions to employment at North Oaks Hospital and some of the region’s smaller manufacturers will aid growth. Of no small concern is how the resolution of the “fiscal cliff” will impact the budget, enrollment and employment at SLU.

• Growth in Louisiana’s rural parishes is projected at 1% a year over 2018-19. Shipbuilders and fabricators in southern regions of the state have experienced significant layoffs due to problems in the oil patch, though a major outlier is Metal Shark Boats which enjoys some nice military contracts. Two significant pipeline projects, a new energy center in Washington Parish, and a major oil storage/blending facility in Port Barre will give a nice positive jolt to this region.

Taking all these regions together, Louisiana began recovering from its 20-month recession in May 2017 and is expected to add 12,000 jobs (+0.6%) in 2018 and an even better 22,300 jobs (+1.1%) in 2019. If our projections are on the mark, the state should reach 2,013,600 jobs in 2019, the first time it has exceeded 2,000,000 jobs on an annual basis in its history.
## Executive Summary Table

<table>
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<th>Item</th>
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<th>2018</th>
<th>2019</th>
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<td>Percent Growth Rate</td>
<td>1.3%</td>
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<td>1.0%</td>
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</tbody>
</table>

Source: LSU forecasting team. *Around a wide range of $30 to $90 a barrel. **Around
a range of $2.50 to $3.70 per mmbtu.

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OUTLOOK FOR 2018-2019:
UNDERLYING ASSUMPTIONS

How fast and how high a rocket will go depends largely on its “boosters”. That first rocket built by the boys depicted in the film “October Sky” made an impressive show for those gathered to watch the blast off. That show pales, though, when compared to watching a liftoff at Cape Canaveral. The boosters make all the difference.

The path of the Louisiana economy depends also on its “boosters”. As we learned in 2008-09, a deeply recessionary national--and international---economy can bring us down no matter how well oil and gas prices are doing. A booming national economy, such as that experienced in the late 1980s can pull the State’s economy up even if energy prices are rather soft.

Energy prices were mentioned twice in that last paragraph because Louisiana remains a very energy dependent state----especially certain areas of the state like Houma, Shreveport-Bossier, and Lafayette. High energy prices “energized” these regions when oil and natural gas prices were high, but as we have learned with a vengeance since 2014, a severe drop in these prices can seriously, and quickly, deflate these regions.

In this section we attempt to gaze into the future and project the nature of these boosters over 2018-19. Prospects for the national economy are addressed first, followed by a look at oil and then natural gas prices. As seen below, hazarding a guess at the direction of any of these boosters is particularly “hazardous” now. Uncertainty abounds.

The National Economy: Trumponomics?

Donald Trump took over as President of the United States in January 2017. A president can have a very meaningful effect on the direction of the national economy. During the previous eight years the Obama Administration had focused more on the issue of income redistribution rather than economic growth. After recovering from the Great Recession, the national economy enjoyed uninterrupted growth during his terms, but that growth was lackadaisical at best.

How will the national economy perform under a Trump Administration? The answer is complicated by the fact that Mr. Trump’s economic philosophy is more difficult to cipher than his predecessors. His pronouncements indicate a distinct shift back to an economic growth focus, but not all of his actual policy recommendations are uniformly growth-oriented.

Trends in Regulations: Positive for Growth

As was documented in previous Louisiana Economic Outlooks (LEOs), the eight years of the Obama Administration resulted in a tsunami of new regulations. One might argue that these regulations were necessary to ensure greater fairness in the economy and to protect the globe from the Administration’s concerns over climate change. Whether one agrees or disagrees with these concerns, a key lesson from principles of economics is that regulations shift the cost curves
of firms upward, leading them to hire fewer people and produce less output. Uncertainty about what new regulations might be coming next is also a bane to expansion decisions.

The President has made it a point of his administration to reduce these regulations. Many were imposed by administrative fiat under President Obama; many can be removed by President Trump by administrative fiat as well. Again, one might disagree with the removal of these regulations, but the fact is their removal will shift cost curves downward and encourage firms to hire more people and produce more output. This policy shift is underway and should improve economic growth.

**Trends in Taxes: Positive for Growth**

Attitudes towards taxes are similarly very different between Trump and Obama. Obama’s focus was on raising taxes to promote his emphasis on income redistribution. Like more regulations, more taxes shift the cost curves of firms upward, leading them to hire fewer people and produce less output. Contrarily, lower tax rates shift cost curves downward and encourage firms to hire more people and produce more output.

There is one key difference between the regulations and taxes. Because regulations were often put in place by administrative fiat, Trump has been busy removing those regulations using his pen. Not so the case with taxes. Changes in taxes must make their way through Congress first. Any growth stimulus from tax cuts awaits Congressional action, and at this writing, Congress has made little progress in rewriting tax laws. Inaction to this point is one reason projections of growth in real gross domestic product (RGDP) remain somewhat muted.

**Trade Policy: Negative for Growth**

There is one glaring negative in Trump’s economic policies---an aversion to free trade. Here again it is helpful to revisit our principles of economics textbook. There we encounter a key law---the law of comparative advantage. This law states that when barriers to trade are reduced between two countries, the standard of living in both countries goes up. There are winner and losers within each country, but on net both countries are better off by lowering barriers to trade. The corollary is that when two countries raise barriers to trade between themselves, the standard of living in both countries goes down.

The passage of NAFTA and the Louisiana economy is a case in point. NAFTA was passed in 1992. Note in Figure 1 the impact on nondurable goods manufacturing employment in Louisiana. The state lost 31,800 jobs. Louisiana lost its largest manufacturing employer during this time period---Fruit-of-the-Loom which employed around 11,000 people. The law of comparative advantage says there will be losers.

However, note in Figure 2, the total impact on Louisiana. The state, over 1990-2000, entered one of its greatest periods of economic growth, adding 330,000 jobs and seeing its per capita income jump 54.8%. On the net, the state came out ahead.
Trump wants to renegotiate NAFTA and has spoken in favor of a border adjustment tax. The law of comparative advantage suggests we will come out the worse. New taxes on foreign goods, more import quotas and tariffs are an anathema to economic growth. Our trading partners will retaliate with higher taxes and tariffs on our goods, possibly provoking a disastrous trade war such as the one that contributed significantly to the Great Depression in the 1930s.
Forecast for the National Economy

There are many other factors that will influence direction of the national economy over the next two years, but these are the more obvious ones. At this early stage of the Trump Administration it is clear that there will be a continued reduction in which is positive for RGDP growth. While the talking points on the tax side are positive for growth, nothing has been done yet, so it is unclear about how much tax reform might boost RGDP. Potentially bad trade policy changes might be stymied in the Senate, where states like Arkansas whose senators represent major retailing companies (e.g. Walmart) that will strongly oppose a border adjustment tax.

Given these considerations, we are projecting that the national economy will expand at a 2.1% rate this year, by 2.5% in 2018, followed by 2.8% in 2019. A solid, successful tax reform move combined with a rejection of anti-free trade policies could make these numbers prove too pessimistic. We rely heavily on macroeconomic analysis by the economics team at Wells Fargo Bank and the multiple forecasts reported in Consensus Forecast USA. It is encouraging to note that neither of these groups is forecasting a recession over the next two years. It is also to note that in July 2017 the Index of Leading Economic Indicators has risen for 11 straight months.

Oil Prices: It Really Was a Shale “Revolution”

If readers think Trumponomics is uncertain, it does not hold a candle to the uncertainty in the oil market. At a conference at LSU’s Center for Energy Studies in Spring 2017, attendees saw a slide shown in Figure 3.

Fig. 3: Various Crude Oil Price Forecasts
Note that oil price forecast for 2017 at that time ranged from a low of $51 to a high of $59 a barrel. As will be shown later, we think it is unlikely oil prices in 2017 will average much above $47. The range in 2018 is even wider, going from a low of $5 to a high of $75. Why does it appear the 2017 projection was too high and why is there such a wide range for 2018? Why is there so much uncertainty in this market? Because it involves the price of oil, it must have something to do with varying views about the demand for and supply of this product.

Demand Side: Little Uncertainty Here

As it turns out, it is not the demand side that is creating all the uncertainty around oil prices. Table 1 documents the U.S. Energy Information Administration’s (EIA) data on actual demand over 2012-16 and the agency’s projections for 2017-18. Demand for oil has been steadily climbing and is projected to continue to do so at least through 2018. This growing demand puts a steady upward pressure on oil prices.

<table>
<thead>
<tr>
<th>Year</th>
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<td>2012</td>
<td>90.7 mmb/d</td>
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<td>2013</td>
<td>91.9 mmb/d</td>
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<td>2014</td>
<td>92.9 mmb/d</td>
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<td>2015</td>
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<td>2018</td>
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Supply Side: OPEC Cuts

In October 2016 the price of oil was hovering around $45 a barrel. After two years of wide open spigots on production, OPEC member nations agreed to impose output cuts of 2.1 million barrels of oil per day (mmb/d)—from 33.7 mmb/d to 31.6 mmb/d. Initially, these cuts had the desired impact on oil prices. By May 2017 the price had jumped nearly 15% to $52 a barrel. In that month the member nations agreed to extend the cuts for another nine months. Unfortunately, several members have let their output creep up so that by July 2017 OPEC production was back to 32.87 mmb/d. This has caused oil prices to dip back below $50 at this writing.

A part of the original agreement was a corresponding agreement by 11 non-OPEC countries to cut their output a combined total of 558,000 b/d. The largest of these cuts—300,000 barrels per day—was to come from Russia. About 67% of these non-OPEC cuts came to pass.
Supply Side: Unexpected Response from the Shale Plays

Ironically, by July the price had dropped back down to $46. This drop was caused by a rapid re-entry of drillers back into the shale plays—especially the Permian Play in West Texas and Eastern New Mexico. By one estimate an $84 billion spending spree occurred in shale plays. A well can be drilled and be producing now in less than a month and a half. Increased output from the shale plays in the U.S. were enough to basically offset the OPEC cuts, so oil prices returned to their previous level.

Why did shale players return to these plays so quickly? The answer lies in the data generated by Rystad Energy in Figure 4.

Figure 4

Breakeven prices in the shale plays have dropped dramatically since 2013, falling from the $80 a barrel range to the low- to mid-$30s. How have these reductions been achieved? There are two broad sources: (1) efficiency gains and (2) prices pressures on suppliers

Once oil prices began their decline entrepreneurs in this industry were highly motivated to find ways to harvest shale oil more efficiently just in order to financially survive. For example, the exploration company EOG has improve its drilling technique so much that it:

- Can drill a mile-long horizontal well in 20 days versus 38 days in 2014;
- Can produce the same amount of oil in 2016 as in 2014 with a budget 67% smaller;
• Has developed a tool called iSteer, which is a device behind the drill bit that transmits depth, direction, types of rock, and presence of gas to geologists in Houston who can send directions back to the driller at the site almost instantaneously.

Once the well is drilled, producers have learned to harvest more oil through the **fracking** process by:

• Using more sand and water than before. A fracking process that used 1,000 pounds of proppant per foot may now use 1,700 pounds;
• The horizontal section has been broken down into narrower and narrower stages. Ones that used to be 240 feet apart are now 100 feet apart;
• The explosions to create cracks in the rock used to be 60 feet apart, and now they are 15 feet apart.

These advances in fracking techniques have radically changed production per well. A typical well in the Bakken Play in North Dakota in 2007 produced about 100 barrels per day. Today that number is 1,000 barrels per day.

The second broad way shale producers have reduced costs is by going to their suppliers---like Schlumberger, Baker Hughes, etc.---and telling them they have to **pay the suppliers less** for their services for the industry to survive. Suppliers reluctantly agreed to these cuts, partly knowing that was the only way for all parties to keep afloat at the lower oil prices. However, this gambit only works when the rig count is **falling**. Once drillers began heading back into the shales plays after OPEC’s cuts, those same suppliers are saying “we cannot get workers to drill and frack your wells if you continue to pay us so poorly.” The result is seen in Figure 5. According to Woods McKenzie, breakeven prices have begun to creep back up.
Implications for Oil Prices

What does all this mean for the future of oil prices? Any time prices jump above the break-even point drillers will quickly jump into the shale plays and start producing more. Indeed, their reaction has been so fast and strong that the U.S. is heading for record oil production by the end of this year.

Rushing in like this (1) raises production, which (2) pushes oil prices back downward towards (3) a now higher break-even point. Easy entry into the shale plays will simply keep a lid on prices rising very much. Because of that, our forecasts for the Louisiana economy is based on oil prices averaging only $52 a barrel in 2018 and $58 a barrel in 2019 (see Figure 6).

Note that we provide these point estimates around a very large range of $30 to $90 a barrel. Candidly, this wide range is a reflection of just how difficult oil prices are to forecast and how easily the market can be disrupted by OPEC or any of its member nations.
Special Case: Gulf of Mexico

The previous section dwelt heavily on the shale plays and OPEC production. More important to the people in Lafayette and Houma is: “What are the prospects for activity in the Gulf of Mexico (GOM)?” There is both bad news and good news.

GOM: The Bad News

Businesses in Louisiana’s southern oil patch are keenly aware of the bad news in the Gulf. It includes:

- The **rig count** has declined from 56 in August 2014 to 17 in August 2017;
- **ConocoPhillips** and **Marathon** both announced intentions to leave deepwater exploration and concentrate capital spending in the onshore shale plays;
- We are aware of at least two companies that have paid $500,000 each to **cancel drillship contracts**;
- **Costs to drill** a well in the onshore shale plays are now under $8 million a well, and there is a 96% chance of hitting a profitable rock. Costs to drill a well in the deepwater GOM can be in the $130-$230 million range, and the probability of hitting profitable sand is more in the 70-80% range at best.
• 14 new **production platforms** have moved into the GOM over 2015-17, which means oil production will be rising significantly in the Gulf. However, these production platforms are put into place to harvest oil that the companies had been drilling for over the past 5-8 years. Importantly for service boat companies like Edison Chouest, Tidewater, Hornbeck, Seacor and Harvey Gulf, these production platforms require about one-fourth the number of supply boats to operate as a drillship.

• **Lease sales in the Gulf** are now sending a bit of a mixed message. They have fallen dramatically since 2014, but in 2017 there has been a reassuring reversal and upward creep. Note these numbers:
  
  - **Western Gulf Lease Sales:**
    - 2014: 14 firms; 93 bids
    - 2016: 3 firms; 24 bids
  - **Central Gulf Lease Sales**
    - 2014: 50 firms; 326 tracts; $851 million
    - 2015: 35 firms; 169 tracts; $539 million
    - 2016: 26 firms; 128 tracts; $156 million
    - 2017: 28 firms; 163 tracts; $274 million
  - **Western, Central & Eastern Gulf Lease Sale** (previously just Western)
    - August 2017: 27 firms; 90 tracts; $121 million

**GOM: The Good News**

The Gulf is not devoid of any optimism. First, notice the slight uptick in the lease sale numbers in 2017 in the previous section. A most hopeful signal for the Gulf is what has happened to the breakeven point. In 2014---before the oil price collapse---the breakeven point was in the $70-$80 a barrel range. This goes a long ways toward explaining why activity has dropped so precipitously in these waters.

The good news is that exploration companies have pushed this breakeven point down to the $40-$60 range. The number will vary by field, but we are told if the amount recoverable from the field is 500-600 million barrels, a $40 breakeven is reasonable. How were these important breakeven costs reduced so much in just 3 years? As was the case for the shale plays, the gains came from two broad sources: (1) increased efficiencies and (2) pushing down supplier costs.

Efficiency gains have come from a number of different sources:

- Shell has employed “irritants”---divisional leaders who challenge the way the company has always done thing. Shell is now drilling offshore 30% faster at 50% of the costs
- Companies are “phasing in” projects rather than doing it all at once. This reduces the front end capital costs and provides flexibility. Shell for example is phasing in its Kaikais Project and has the breakeven down to $40 a barrel.
• Firms are totally redesigning some projects. As an example the Mad Dog 2 platform was projected in 2013 to cost $20 billion. By 2016, through redesigning, the costs were pushed down all the way to $9 billion and a final investment decision was made to go forward with the project.

• Traditionally, the way a field is harvested once all the wells are drilled, is to spend billions on a new production platform just for that field. Now firms are cooperating among themselves to use subsea tiebacks to an existing platform in close proximity. Figure 7 illustrates how Shell’s Kaikais Field will be tied back to the existing Ursa Platform instead to spending billions for a platform just for Kaikais. The Julia and Buckskin Projects were initially designed as standalone projects but have been designed as subsea tiebacks.

**Figure 7**

**Illustration of a Subsea Tieback: Kaikais to Ursa**

An obvious question is why would any company operate in the GOM given the benefits and costs compared to the shale plays? After all, one can make a deal with a rancher in West Texas to drill on his land and have a completed, producing well in less than three months. Compare that to spending 7-10 years engaging in seismic work, getting leases from the federal
government, drilling wells, designing and putting in place production systems, etc. in the GOM. Why not follow ConocoPhillips and Marathon and work exclusively in the onshore shale plays?

The answer lies in the potential harvest. A well completed in the Bakken Shale will yield 1,000 barrels per day, but then output drops dramatically---sometimes as much as 65% between the first and second years of production. By contrast, wells in Chevron’s St. Malo Field are producing 14,000 barrels per day and the decline curve is very shallow. There is still plenty of incentive to drill in the GOM.

Watch That BE in the GOM

To this point the news about the GOM is trending in a positive way. The declining breakeven price has revived some projects that were previously considered dead. However, analysts need to keep a cautious eye on the breakeven price going forward. That is because efficiency gains were only one part of bringing that price down. The other was by gaining price concessions from suppliers. As the GOM starts to come back, those suppliers are unlikely to be able to serve the exploration companies and keep their prices low. We should expect the same thing to happen in the Gulf that is happening in the onshore shale plays: Price demands from suppliers will put upward pressure on the breakeven price. How many final investment decisions (FIDs) will be delayed or withdrawn when this happens? A watchful eye is required here.

Natural Gas and the Industrial Boom

Natural gas prices are far less complicated than oil prices. Figure 8 provides the reader with a history of natural gas prices over 1980-2017 along with our forecast for 2018-19.

The shale revolution—whose influence was vividly described in the oil price sections above—is also apparent in the striking decline in natural gas prices in 2009. Our nation is now awash in natural gas, both from the “dry” plays---like the Haynesville and Fayetteville Plays---and from “associated” gas produced as firms are harvesting oil from oil plays.

The U.S. is now a net exporter of natural gas, shipping the product to Mexico via new pipelines and exporting it to other countries in the form of liquefied natural gas (LNG) from the new Cheniere Export Terminal near Lake Charles. Despite this increased export demand, we believe there is so much natural gas available in the country that prices will remain low, averaging $3.20 per mmbtu in 2018 and $3.30 in 2019 (around a very narrow band of $2.50 to $3.70 per mmbtu).
An Enormous Industrial Boom

This natural gas price drop, combined with its expected abundance, has set in motion an industrial renaissance like at no other time in the state’s history. Along with the folks at the Greater Baton Rouge Industrial Alliance (GBRIA) we have documented at least $178.8 billion in announcements since 2012. These announcements are (1) highly concentrated in three MSAs in the state---Lake Charles, Baton Rouge, and New Orleans---and (2) are highly concentrated in two industrial sectors---chemicals and LNG export terminals.

Not all of these announced projects have been completed or are under construction. A non-trivial portion still remains at the front-end engineering and design (FEED) stage. Table 2 shows the breakdowns by geographic area and by FEED/under construction-completed.

Of the $178.8 billion in announcements, a little less than half (48%) have been constructed or are underway. The trigger still has not been pulled on $93.5 billion in projects---a point to which we will return below. The great majority of the projects are located in the Lake Charles MSA, specifically on the Calcasieu Ship Channel and on the east bank of the Sabine River. Both sites allow for the movement of vast amount of chemicals and LNG by ocean-going vessels. Like the state, a little less than half of the projects announced in Lake Charles are completed or are under construction. Nine of the projects in the Lake Charles MSA are LNG export terminals.
export terminals and only two of those are under construction.\(^1\) This important LNG market will be addressed further and in detail below.

#### Table 2

**Industrial Announcements by Region & Status: 2012-17**

<table>
<thead>
<tr>
<th>Region</th>
<th>Amount*</th>
<th>Percent of Area Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Statewide:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Announced</td>
<td>$178.8</td>
<td>100%</td>
</tr>
<tr>
<td>At FEED Stage</td>
<td>$93.5</td>
<td>52%</td>
</tr>
<tr>
<td>Constructed/Underway</td>
<td>$85.4</td>
<td>48%</td>
</tr>
<tr>
<td><strong>Lake Charles MSA:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Announced</td>
<td>$126.0</td>
<td>100%</td>
</tr>
<tr>
<td>At FEED Stage</td>
<td>$70.1</td>
<td>56%</td>
</tr>
<tr>
<td>Constructed/Underway</td>
<td>$55.9</td>
<td>44%</td>
</tr>
<tr>
<td><strong>New Orleans MSA:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Announced</td>
<td>$33.7</td>
<td>100%</td>
</tr>
<tr>
<td>At FEED Stage</td>
<td>$22.7</td>
<td>68%</td>
</tr>
<tr>
<td>Constructed/Underway</td>
<td>$11.0</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Baton Rouge MSA:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Announced</td>
<td>$15.9</td>
<td>100%</td>
</tr>
<tr>
<td>At FEED Stage</td>
<td>$0.2</td>
<td>1%</td>
</tr>
<tr>
<td>Constructed/Underway</td>
<td>$15.7</td>
<td>99%</td>
</tr>
</tbody>
</table>


Interestingly, the other two MSAs listed in table 2 are at opposite ends of the spectrum when it comes to the status of the projects. Most of the projects (99%) in the Baton Rouge MSA are under construction or have been completed. In the New Orleans MSA only a third of the projects are underway or completed while two-thirds are at the FEED stage. As will be shown in the write up on this MSA later in the LEO, many of the large New Orleans projects are to be located on the extreme western edge of this MSA in St. James Parish.

**Threats to the Boom**

It can be argued that a laser eye should be kept on the FEED numbers in Table 2. At the state level the figure is $93.5 \text{ billion}$---an enormous number by historical standards in Louisiana. In fact the author keeps up with nine other states in the southeast. At best, only $5 \text{ billion}$ in such announcements have been made in any one of those states. Most have enjoyed far less success than that.

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\(^1\) We do not include in our numbers the Delfin LNG project which will be located offshore using a special ship that will be constructed out-of-state.
Louisiana has a great number of construction and high-paying permanent jobs at stake in these FEED projects. Two points should be borne in mind as these FEED projects are considered. First, Texas is our very close competitor for these projects, offering the same deep draft ports and pipeline access to natural gas that Louisiana offers.

Secondly, the decision to pull the trigger in Louisiana or to move to Texas is basically a matter of math. Analysts in these firms are estimating the rate of return on investment (ROI) in both states. If Louisiana does something to increase costs of operation here, that moves the math in favor of Texas. This thought is vitally important because the state is facing a $1.5 billion shortfall in its budget. How will this shortfall be addressed? The Governor, the Legislature, and the voters need to realize that the more this shortfall falls on business, the more the math moves these projects towards Texas. And there is not just a little bit at stake; there is $93.5 billion.

Special Case: The LNG Market

Of the $178.8 billion in announced projects, fully $102.1 billion are LNG export projects. Two of the larger of these—Cheniere LNG and Cameron LNG at $20 billion each—are underway. In fact, Cheniere began shipping from its first train in spring 2016 and has now shipped out more than 140 ship loads from its site in Cameron Parish.

Nine LNG export terminals remain at the FEED stage, representing a total capital spend of $62.1 billion. (Note: A 12th terminal---Delfin---is not included in our numbers because it will be located offshore using a ship that will be built out-of-state.) Of these nine, seven have been proposed for the Lake Charles MSA ($52.7 billion in capital spending). Another is planned for Plaquemines Parish and another at Port Fourchon in Lafourche Parish.

The LNG Market Has Flipped

Why are these nine LNG projects still at the FEED stage? The reason is that the LNG market has changed significantly since Cheniere and Sempra raised money to build their projects. The data in Table 3 provide the first clue as to one of these changes.

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Comparative Market Price for LNG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oil Price = $100</td>
</tr>
<tr>
<td>Foreigner LNG Price (15% of Oil Price)</td>
<td>$15 mmbtu</td>
</tr>
<tr>
<td>U.S. Supplier LNG Price:</td>
<td></td>
</tr>
<tr>
<td>Henry Hub Price of LNG</td>
<td>$3.50 mmbtu</td>
</tr>
<tr>
<td>15% for Liquefaction</td>
<td>$0.53 mmbtu</td>
</tr>
<tr>
<td>Capital Recovery</td>
<td>$3.50 mmbtu</td>
</tr>
<tr>
<td>Transportation to Asia</td>
<td>$2.00 mmbtu</td>
</tr>
<tr>
<td><strong>Total U.S. Supplier Price of LNG</strong></td>
<td><strong>$9.53 mmbtu</strong></td>
</tr>
</tbody>
</table>
Suppose you are a Japanese power company wishing to buy LNG to run your turbines. Until recently you had to buy LNG from, say, Russia or Qatar, and those countries price their LNG off the price of oil. They would charge you 15% of the price of oil, so if oil is at $100 a barrel, you will pay $15 per mmbtu for your LNG.

Suddenly, natural gas prices drop in the U.S. due to the ocean of gas created via the shale revolution. Cheniere comes to you and says they will charge you only $9.53 per mmbtu. As seen in Table 3, Cheniere’s price is made up of four components: (1) their cost of buying natural gas, (2) their expenses to liquefy the gas, (3) a capital recovery fee to help Cheniere recover the $20 billion it spent at the site, and (4) a charge for transporting the LNG to Asia. Faced with a difference between $15 from Russia versus $9.53 from Cheniere, you are more than happy to sign a 20-year contract for LNG from Cheniere. Indeed, both Cheniere and Sempra (Cameron) were able to get several 20-year take-away contracts like this back when the price of oil was $100, and that enabled these firms to raise the capital to build their facilities.

The last column of Table 3 illustrates the problem facing the nine LNG projects at the FEED stage. The price of oil is no longer $100; it is closer to $50. Now the economics have changed. A Japanese power company is looking at $7.50 per mmbtu from Russia versus $8.53 from say Venture Global (VG). The power company is no longer willing to sign 20-year take away contracts for VG’s LNG, making it difficult for the firm to raise the $4.3 billion to build its LNG plant in Cameron Parish.

**LNG Supply & Demand**

A second factor causing delays in pulling the trigger on LNG projects is the state of the world market for LNG. The problem is illustrated in Figure 9 which was put together by BRG Energy. The dark jagged line represents the world demand for LNG. The purple line tracks the supply of LNG which is rising as new LNG projects begin exporting. The market has moved into a surplus position that will last until around 2022, then it will enter a shortage position where new LNG projects will be needed.
China Factor: The Economic Cooperation 100-Day Plan

There is one new factor that has arisen this year which should help the case of Louisiana’s nine FEED-stage LNG projects. In May 2017 the U.S. signed the Economic Cooperation 100-Day Plan with China. One aspect of that agreement is that China will now be treated “no less favorably than any other non-FTA trade partners with regard to LNG export authorizations.” This means LNG exports to China are now considered in the national interest, making China free to negotiate contracts with LNG exporters. The potential market: 75 million tonnes a year of LNG exports. For U.S. companies this is the equivalent of shifting the black jagged line upward in Figure 9.

What should expectations be for the nine remaining LNG projects? Look for companies to wait to start construction until late 2018 or 2019, so that their plant can come on line about the time the world market enters a shortage situation again.
THE OUTLOOK FOR THE METROPOLITAN STATISTICAL AREAS

There are 64 parishes in Louisiana, and the U.S. Bureau of Economic Analysis (BEA) has taken 35 and separated them into nine metropolitan statistical areas (MSAs). These parishes are all grouped around one or more major cities in the state. Map 1 shows the location of each and the parishes that are in each MSA. Important changes took place in 2015 when the definitions of three MSAs expanded: (1) Lafayette added Acadia, Vermilion and Iberia Parishes, (2) Shreveport-Bossier added Webster Parish, and (3) New Orleans added St. James Parish. For the first time in decades Louisiana added an entirely new MSA---Hammond---which is composed of Tangipahoa Parish.

Visit to a Bakery

Visit a local, upscale bakery and you do not see just cakes. Offerings also include, eclairs, donuts, cupcakes, and even the cakes come in various sizes. The point is, all the items are different. In the same way, the nine MSAs in Louisiana are not all the same. Each one is really different from the others. They are all part of the Louisiana economy, but each one is very
unique and different from the others. Each has a different economic base. Each recovered from
the Great Recession at a different pace. Each has felt the collapse of oil prices in a different way,
each has different obstacles to overcome going forward, and the future prospects for each are
quite different.

New Orleans MSA, with an estimated 578,700 non-farm workers, is the largest MSA in
the state. Though there have been some great advances in this region since the mid-2000s, this
MSA’s employment still remains 51,700 jobs (or 8.2%) below its Pre-Katrine/Rita peak. Situated
in the “toe of the boot” near the mouth of the Mississippi, the MSA’s system of ports ranks
among the largest in the world in terms of tonnage moved. It houses a huge medical complex for
veterans and non-veterans, and it is the home to several universities---the largest being the
University of New Orleans and Tulane University. New Orleans proper is a tourism magnet, in
some cases attracting tourists to the unique French Quarter and to the MSA’s substantial gaming
industry anchored by the state’s only land-based casino, two other riverboat casinos, and the
Churchill Downs Racetrack. A number of large refineries (including the third largest in the
country) and chemical firms reside within this MSA’s boundaries, along with some key energy
companies such as Chevron and Shell. Recently the region has attracted a burgeoning tech
sector.

Second in size, Baton Rouge provides jobs for about 409,100 non-farm workers. The
petro-chemical industry looms large in this MSA with the largest concentration of chemical
employment in the state, the country’s fourth largest refinery, and an unusually high
concentration of industrial construction workers to support that base. Both LSU and Southern
University are located in this MSA along with Baton Rouge Community College, which is now
larger than Southern. This is also the location of the State Capitol, which means government
employment plays a major role in this MSA. Its growing high tech sector is anchored by the new
IBM complex in downtown Baton Rouge. It is the home of three riverboat casinos and has a
healthy digital gaming sector.

The fourth largest MSA is Shreveport-Bossier (179,200 jobs in 2017). This MSA
contains the State’s largest gaming sector with six riverboat casinos and one racetrack. A very
active port---the Port of Caddo Bossier----exists on the Red River in the Shreveport-Bossier area.
It hosts a number of large employers including a major steel mill. With just over 9,155 military
and civilian personnel, Barksdale Air Force Base gives this community a significant military
presence. High tech is a growing presence in this region with the addition of Computer Science
Corporation as the 800-job anchor of the MSA’s National Cyber Research Park. Shreveport-
Bossier is in the heart of a huge deposit of natural gas called the Haynesville Shale.

Louisiana’s third largest MSA is Lafayette (199,100 jobs) and its sixth largest is Houma
(85,700 jobs). We put these two together because both have an unusually high concentration of
firms associated with the oil and gas extraction industry, so fluctuations in energy prices
powerfully impact these two regions. They are, however, not identical. Lafayette is more
diverse, hosting the nation’s largest jewelry settings manufacturer, a large, successful ambulance
firm, a firm that provides ER personnel to hospitals in several states, and one of the nation’s
largest home health companies. Because of its location closer to the Gulf, Houma supports
major shipbuilding and fabrication firms and is home to Port Fourchon, a port that services over 90% of the structures in the Gulf.

The most closely watched MSA in the state over the next few years is likely to be Lake Charles, (113,800 non-farm jobs). Like Baton Rouge, Lake Charles has an unusually heavy chemical and refining base---the second largest concentration in Louisiana after Baton Rouge. Over 70% of the $178.8 billion in announced industrial expansions since 2012 are scheduled to occur within this MSA. The industrial construction sector was already a major player in this region; now it has expanded dramatically. Two LNG export terminals are under construction in this MSA and eight more are at the FEED stage. With three casinos (two very large), a racetrack, and a large Indian casino nearby, Lake Charles is the state’s second largest gaming market. Another unusual characteristic of this MSA’s economy is the large aircraft maintenance and repair sector at Chennault Airpark.

Located in the northeastern area of the state, Monroe (79,900 non-farm workers) is the third smallest of the nine MSAs. This MSA can brag of housing one of only two Fortune 500 firms in Louisiana---CenturyLink. Chase has a large mortgage facility Monroe. The large Graphics Packaging facility gives Monroe an out-sized presence in the paper and lumber sector. Vantage Health is a growing, new presence in the area with over 1,280 employees.

The second smallest item in the bakery would be Alexandria. Located in the central part of the state, this MSA will have about 62,800 non-farm jobs in 2017. There is a diverse mixture of major players in this MSA including Cleco (a large utility company), Proctor & Gamble, Union Tank Car, Crest Industries, and Roy O. Martin Lumber. One of the MSA’s jewels is England Airpark, which houses Union Tank Car and recently became home of a 150-person Immigration and Customs Transfer Facility. Alexandria has a strong military influence due to nearby Fort Polk---the largest single employer in the state.

The smallest of Louisiana’s nine MSAs is its newest member---Hammond. With employment at an estimated 45,500 in 2017, Hammond’s economic base is Southeastern Louisiana University and a significant healthcare sector anchored by the very large North Oaks Medical Center. Tangipahoa Parish is also a bedroom region for people who work in New Orleans, Baton Rouge, and in plants along the Mississippi River. Some 14% of income earned by Parish residents is earned outside of the Parish.

In the sections below we will give a brief employment history of each of the state’s nine MSAs, along with the Louisiana Econometric Model (LEM) forecast for 2018-19. In each MSA, we will explain the key factors and companies driving the region’s future.

**The New Orleans MSA: Industrial Construction vs Oil & Gas**

The New Orleans MSA is the largest in the state and is composed of eight parishes---Orleans, Plaquemines, Jefferson, St. Charles, St. John the Baptist, St. Tammany, St. James, and St. Bernard. Employment in this MSA is now at about 578,700---still about 41 percent larger
than the Baton Rouge MSA. These eight parishes are located in “the toe of the boot” (see Map 1).

It has been a wild ride for this MSA over the last 35 years. The good news is the MSA enjoyed a solid recovery from the Great Recession despite the drag of a 4,500-job loss at Huntington Avondale Shipyard. New hires in a major hospital sector whose construction is finally completed, major industrial construction projects, and new high tech firms are a plus for the future of the New Orleans MSA, but the oil and gas exploration sector---and firms associated with it---continue to be a drag on the region.

**History Pre-Katrina & Rita**

Figure 9 tracks the non-farm employment history in New Orleans from 1980 through 2017. New Orleans suffered mightily during the 1981-87 recession, losing 40,400 jobs or 8.3 percent of its workforce. This MSA had more extraction sector employees than any other area in the state in 1981---20,600. By 1987, problems in the oil patch had driven that figure down by nearly 30 percent to 14,600, as many firms relocated their headquarters operations to Houston and employment in the industry in general declined.

New Orleans’ manufacturing sector also took a beating, falling from 61,300 workers in 1981 to 41,700 by 1987. Much of this decline occurred in the shipbuilding segment of manufacturing which alone lost 6,900 jobs. Shipbuilding at the time was very energy-focused with little diversity in its orders. Multiplier effects from these shipbuilding layoffs dealt the MSA’s real estate, retail, services, and financial markets punches that would have them floored until well into the 1990s.

Like the other MSAs with strong energy ties---Houma and Lafayette---New Orleans began a slow recovery in the late 1980s. Then another round of layoffs at Avondale Shipyards and the soft natural gas prices of 1991-92 flattened growth in 1992. A further blow occurred when the Challenger accident caused a slowdown in flights of that spacecraft. This meant fewer flights and fewer external fuel tanks to be built by what was then Martin Marietta.

The big jump in 1994 and 1995 shown in Figure 9 will look familiar to readers who carefully examine these same two years in the graphs of the other two major casino markets---Lake Charles and Shreveport/Bossier. Four riverboat casinos with about 3,300 workers opened during this time period. Secondly, the land-based casino opened at a temporary site, and construction began on the massive permanent location at the foot of Canal Street. This injection of new jobs was enough to generate healthy annualized growth rates of 2.6 percent per year during 1994-95.
New Orleans’ employment trend from 1999 to 2001 was virtually flat. Then, in 2001, employment in the region responded to the national recession and other events with a **one-year loss of 10,300 jobs**, ranking it number five among the hardest hit MSAs in the state by the post-911 national recession. Note in Figure 9 that the two years after the recession---2003-04---were not particularly great recovery years. High natural gas prices led to the closing of some ammonia fertilizer plants in the area and to general sluggishness in the region’s large chemical industry. Employment rose at a moribund 0.5 percent rate a year. An important fact from examining Figure 9 is that **for six straight years before Katrina and Rita hit, employment in this MSA was virtually flat**.

**The Impact of Katrina & Rita**

Of course, the most profound message from Figure 9 is the impact of hurricanes Katrina and Rita on the MSA. On an annual average basis, **Katrina and Rita caused employment to fall by a remarkable 133,700 jobs or 21.8 percent**. These two storms effectively drove New Orleans MSA’s employment back to levels it had not seen since 1977. Three decades of employment growth were wiped out overnight. According to Figure 9, the New Orleans economy had recovered 82,800 of those jobs by 2017, but the MSA employment is still lower than it was in 1980 and is still 50,800 jobs (-8.1%) below its 2001 peak employment year.
Actually, the use of annual average data in Figure 9 does a poor job of illustrating how badly these storms impacted the New Orleans economy. On a monthly basis the job-destruction was much greater than suggested by the annual average data. By the time Rita had re-flooded New Orleans, the region had lost 177,900 jobs, an astounding 29.5 percent decline.

**Recovery rate very slow:** A disheartening factor has been the slow recovery since the storms. More frequently one would see a “V” pattern in employment right after a disaster as massive federal recovery and private insurance monies flow into the area for the re-build effort. We saw this “V” pattern, for example when observing the recovery in Lake Charles and Pascagoula, Mississippi.

In New Orleans, the recovery looks like a “kindergarten L”. Why has the recovery rate been so slow? Few would dispute that housing has been a key factor. First, there is just the sheer size of the destruction. There were almost 182,000 homes in the New Orleans MSA that incurred either severe or major damage, i.e. damage bad enough to render the home uninhabitable. Some have estimated this is seven times more homes destroyed than in any other natural disaster in our country’s history.

Secondly, these homes were rendered uninhabitable by flood waters. When flood waters enter a home, regular home owner’s insurance no longer applies. The owner must have purchased national flood insurance. As it turns out, 74 percent of these homeowners had no flood insurance. Those who did have flood insurance discovered that it covered only 80 percent of the pre-flood value of the home up to a maximum of $250,000. Virtually every home owner, even if they had flood insurance, was left with a gap in their coverage.

To cover this gap in coverage, the generous taxpayers in the other 48 states agreed to send a pot of money to Louisiana and Mississippi to help homeowners bridge this gap---what was referred to in Louisiana as the “Road Home” monies. These monies were critical in rebuilding many of the homes. Still, there remain large swaths of New Orleans East and St. Bernard Parish where people have simply chosen not to return.

Finally, consider four other issues. Recall from Figure 9 that in the six years before the storms hit the economy in New Orleans was basically flat. Families that had been dispersed by the storms to Dallas, Houston, San Antonio or even other parts of Louisiana, typically found themselves in much more robust economies with more, and higher-paying, jobs. Secondly, it is a fact that public schools in the New Orleans area were among the worst in the state (if not the nation). Dispersed families found themselves in cities with much better public school systems. The good news is that the advent of charter schools into the Orleans Parish system has apparently improved these schools significantly. Thirdly, dispersed families watched with alarm the deteriorating crime situation in New Orleans, and this no doubt retarded the return rate.

**The Drag of the Great Recession**

Finally, the Great Recession hindered this MSA's recovery. Bolstered by massive amounts of construction spending to rebuild houses, levees, locks, etc., and the boost from the availability of Go Zone funding, the New Orleans MSA actually enjoyed employment growth in
2008. However, the drag of the national economy finally had an impact in 2009 and 2010, when the MSA lost 6,700 jobs—a 1.3 percent decline. That was actually not a bad performance considering that the national economy fell by 6.1 percent. The performance of the New Orleans MSA economy during the Great Recession was actually the best performance relative to the state’s other nine MSAs.

**Solid Recovery from the Great Recession**

Recovery from the negative impacts of the Great Recession (but not the hurricanes) has been impressive for the New Orleans MSA. Note back in Figure 9 that the region enjoyed five straight years of solid growth. Indeed, the MSA had recovered all the jobs lost during the recession by 2011.

This performance is particularly impressive given that it occurred against the backdrop of the 4,500+ layoffs at Huntington Avondale Shipyards, about two-thirds that loss again at the Michoud Assembly Facility, and at least a $1 billion decline in Army Corps of Engineers spending on rebuilding the area’s levee system.

**2016-17: The Drag of Oil & Gas**

It is unfortunate that the region could not stay on the steady growth path of 2011-15. The New Orleans is the home of many firms in the oil and gas industry or in industries closely aligned with exploration and production activities. The recent large decline in oil prices has dinged the region enough to offset nice gains in other areas.

On the oil and gas side, Shell moved 95 people to Houston, Freeport McMoran dropped 32 jobs, Hexion closed at facility at Norco (-97 jobs), and Chevron had a temporary reduction in force at its Covington office (Chevron employment is now higher than pre-layoff conditions). A reduced demand for supply boat services in the Gulf has led Hornbeck to stack 45 of its 62 boats and layoff 1,000 mariners and 150 onshore workers.

Adding to the employment issues, between 2015 and 2017 the Army Corps of Engineers reduced spending by $311 million on its Hurricane and Storm Damage Risk Reduction System. Trinity Yachts shut down its site in Madisonville at a cost of 60 jobs, and Louis Dreyfus closed its packaging facility in Gramercy (-49 jobs). Chiquita returned its operations from the Port of New Orleans to Gulfport (-100 longshoremen), and Macy’s closed its store in Esplanade Mall (-116 jobs).

Offsetting these declines was the opening of the huge new University Medical Center Hospital to replace the old Charity Hospital, some $11 billion in industrial construction, and the final construction work on the new VA Hospital. During this period work was completed on the $66 million Pin Oaks Terminal in St, John the Baptist Parish, generating 70 new jobs at $70,000 a year. Zen-Noh Grain completed its $150 million dock extension and continuous barge unloading system (+15 jobs). Millennium Galvanizing (a Crest company) opened its new facility in Convent and is now up to 65 employees. TCI Plastics has completed its $36 million logistics facility at the Port of New Orleans and began hiring for its 160-person workforce in
June 2017. Construction has begun on some other large-scale industrial projects that will be discussed below. Construction will be completed this year on the $35 million addition to the A.B. Freeman School of Business at Tulane.

The result of all this is that the track of employment in this MSA resulted in a net loss of only 600 jobs in 2016---not bad for an MSA with such deep oil and gas roots. In the upper left-hand corner of Figure 9 are listed the job changes by month in the first seven months of 2017. The good news for New Orleans is that despite the bad number in January (-2,000 jobs) the MSA is averaging a net gain of 1,200 jobs, and the last two months showed even better growth. **We are projecting a net gain of 2,800 jobs (+ 0.5%) for the New Orleans MSA for 2017.**

**Forecast for 2018-19: Strong Boost from Construction to the West**

As one examines this, the largest MSA in Louisiana, there are some broad factors that will affect its economy over the next two years. On the downside, the oil and gas extraction industry---and any businesses closely associated with it---are expected to continue to struggle over 2018-19 as firms await a clear pattern in oil prices that will justify a return to the Gulf. While most of the negative employment changes have been made over the past two years, it is anticipated that more will occur on a slightly lower scale.

On a more positive note, it was documented back in Table 2 that on the area’s $33.7 billion in industrial announcements only $11 billion are underway. The last four words in that sentence are really silly: “only $11 billion are underway”?! The very magnitude of those projects is what has enabled this MSA to grow in 2017 despite the hammer blows delivered by the oil and gas sector.

The good news is that another $22.7 billion in industrial projects have been announced but have not broken ground. Three characteristics of these projects should be kept in mind when thinking about New Orleans’ immediate future. First, with but two major exceptions, these projects are expected to be built. Secondly, the larger of these projects are unlikely to break ground until late 2018 or in 2019. For this reason, our employment projections for this MSA in 2019 are more optimistic than for 2018. Finally, with but one exception, these projects are to the west of New Orleans proper---especially in St. James Parish.

Figure 10 provides the reader with the history of the New Orleans MSA employment from 1980 through 2017 along with forecasts for 2018-19. We are projecting **this MSA will add 4,600 jobs in 2018 (+0.8%) and a higher 7,600 jobs in 2019 (+1.3%)** as construction begins on some of the larger industrial projects that have been announced. The addition of these 12,200 jobs will make this the fastest growing MSA in the state in absolute terms and the third fastest in percentage terms. As clearly seen in Figure 10, by the end of the forecast period the New Orleans MSA employment will still be 38,000 jobs below the peak achieved before Hurricanes Katrina and Rita.
Industrial Projects under Construction

This region has already begun to feel a lift from major industrial projects that are under construction. They include the following:

- The largest of these projects is **Yuhuang Chemicals**’ new plant in St. James Parish. Construction began on the $850 million first phase in April 2017. Plans are to open this phase in 2019 and immediately start construction on the $1 billion second phase. Once both phases are completed 400 employees will be working at an average wage of $85,000 (about twice the average wage in the private sector in Louisiana). Yuhuang recently let a contract with Air Liquide to build a $170 million plant to supply oxygen to the complex. Methanol made at this plant will primarily be for shipping to China.

- **Monsanto** broke ground in February 2017 on a $975 million expansion of its herbicide producing plant in Luling. When completed in 2019, the plant will have an additional 120 workers earning an average of $76,500 a year.

- **Entergy Corporation** is spending serious money on its power plants in the region. Work began this year on the $869 million Little Gypsy power plant in Montz. At Waterford 1, 2, 3, and 4 and the Little Gypsy site $115 million is being spent on maintenance work, while another $50 million in underway on upgrades at Ninemile Point.
• In Garyville, the nation’s second largest refinery---Marathon---has a $220 million project underway for upgrading its fluid catalytic cracker, a project that will be completed by year’s end. Another $120 million project to produce ultra-low sulfur diesel (ULSD) is in construction, and Marathon signed a contract for an undisclosed amount to supply oxygen to support its ULSD facility.

• Again in St. James Parish, Shell Motiva has a $150 million H-Oil recovery project under construction. No new jobs are expected when this facility is complete in late 2017.

• Diamond Diesel will complete its $190 million expansion of a facility that converts animal fat to diesel. The expansion will enable the firm to boost production from 165 to 270 million gallons annually.

• In Gramercy, Noranda Bauxite and Chemicals had begun construction of a $35 million expansion and upgrade that will lead to 65 new jobs and 15 corporate headquarters jobs.

**Industrial Projects at the FEED Stage**

As mentioned above, these numerous and very large projects have been critical in allowing the New Orleans MSA to add net new jobs when so many jobs were being lost in the oil patch. The good news is the stage has been set for even more, large, job-creating projects within our forecast time frame. These projects are at the FEED (front-end engineering and design) stage. Some of these may never break ground, but prospects for most are very positive. Most are located to the west of New Orleans proper.

• It was with great excitement that state officials announced Formosa Petrochemicals had chosen St. James Parish as the site for a new $9.4 billion chemical complex that would include an ethane cracker and downstream chemical manufacturing plants. The firm has purchased land next to the Mosaic facility and has applied for permits to start construction. When complete, an estimated 1,200 high-paying jobs would materialize at the site. Construction would likely start in 2019, and a very high probability is placed on this project going forward.

• The one exception to the westward bias in these potential projects is Venture Global’s $8.5 billion LNG export facility planned for the Citrus Terminal at the Port of Plaquemines. Once operational, 250 people will be employed at this plant at an average annual salary of $70,000. A quick look back at our analysis of the LNG market on pages 15-17 leads one to believe this project would not start construction until late 2018 or into 2019.

• Back on the western outskirts of this MSA, South Louisiana Methanol has announced plans to build a $1.7 billion ethanol plant---the largest in North America---in St. James Parish across from Nucor’s steel mill. If constructed, the plant would hire 65 workers at $66,500 a year. The firm still has not purchased any land and is awaiting a final
investment decision (FID). The lack of land purchase moves this announcement to a lower probability of coming to fruition.

- Mixed comments have been received on the potential of the Eurochem project scheduled for St. John the Baptist Parish. The company has purchased a site, has engineering underway, and submitted air permit applications. This urea production plant would hire 200 people at an annual wage of $58,000. While many local economic developers are skeptical, officials at the state-level are more optimistic.

- Wanhua Chemicals has chosen St. James Parish as a site for a proposed $1.12 billion methanol plant. One hundred seventy jobs at $70,440 would work at the completed plant. Economic developers are very positive about this announcement, though construction probably would not begin until the latter part of our forecast period.

- Shell Motiva in St. James Parish is awaiting an FID on a $380 million “Amite Expansion”. One hundred new jobs would accompany this new facility.

- Another methanol plant proposed for the region is a $350 million project about 10 miles south of the Sunshine Bridge by Syngas Energy Holdings. This project has been permitted and ground-breaking has been stalled by a weak methanol market. Associated with a fully-constructed facility would be 100 new jobs paying $78,600.

- In Reserve, Louisiana, First Bauxite Corporation wants to build a $200 million processing plant to make proppants for the oil and gas extraction industry. This plant would be built at the Globalplex International terminal in St. John the Baptist Parish and would employ 100 new workers at $70,000 a year. No cooperative Endeavor Agreement has been signed with the state, and the firm is still seeking financing. Probability less than 50%.

- In past LEOs the probability of Gavilon Commodities building a new $300 million grain elevator and creating 150 new jobs has been listed in this section. While still technically alive, we understand the probability of this project moving forward is not high. It is not listed in our total for this MSA back in Table 2.

- Valero Refinery in St. Charles Parish has filed an advanced notification for a new $325 million gas desulfurization unit. Start date for construction is not clear but this project is very likely to go forward.

- Back to the east at the Port of Plaquemines, the $162 million, first stage NOLA Tanking tank farm at Myrtle Grove Plantation is still alive. A total of three stage are planned ($250 million total) generating 54 new jobs. Most permits have been secured (95%) but construction has not started.

- Again to the east, the Ram Terminal project to construct a $150 million coal export terminal on the Mississippi River is on hold. Environmentalists have asked the Department of Natural Resources to re-examine the company’s permits.
Stability in Other Manufacturing

Other key manufacturers in the region are fairly stable for the next two years. **Textron Marine and Land Systems** has two units in the region. Its marine facility at Michoud has secured a $264 million in contract with the Navy to manufacture ship-to-shore connector amphibious craft. The company has been working on another $500 million contract, and the site should be fully funded through 2020 and continue to support its 425 workers. Textron’s vehicle plant in Slidell builds the COMMANDO Elite armored vehicle. Presently the firm employs 347 workers and has completed contracts to manufacture vehicles for Iraq and Colombia. A contract to build 500 Tactical Armored Patrol Vehicles for Canada will sustain employment through early 2018. The firm is awaiting an award for COMMANDO Select armored vehicles for the USG in 2017-III. There may be some downturn at the plant due to timing in these contracts.

The **Michoud Assembly Center** has spent much of the year recovering from a tornado that hit the site in February 2017. The damage was bad enough to the **USDA Finance Center** that the building was condemned. Workers are gradually being brought back. The USDA is at 1,500 workers and could add another 500 over the next two years. **GE/Blade Dynamics** was also displaced by the tornado. Employment there is at 100. Acquisition of LM—a Danish blade manufacturer—is expected to ramp up employment to 600 soon. Michoud remains the site for manufacturing the SLS (Space Launch System). Between Lockheed and Boeing the combined employment is at 675. A second shift has been added and employment is growing.

**Bollinger Shipyards** maintains two sites in the region—repair yards in Algiers and Harvey. The firm’s workforce of 250 at these yards is expected to remain stable. Considerable excitement surrounded the announcement that the investment firm Hilo Global had signed a purchase agreement on the vacant **Huntington Avondale Shipyard**. It is unclear what plans Hilo has for the site. The sale was not complete at this writing. **Intralox** in Jefferson Parish is planning a $26.5 million expansion that will result in 87 new jobs.

A Vibrant Healthcare Sector

Major boosts to employment in the region came in the last two years with the completion of the new $995 million VA Hospital and the new $1 billion University Medical Center. Three other additions are impacting the region’s economy over 2018-19. **Ochsner Health Systems** has begun construction on a $360 million expansion. This huge project is scheduled for completion in 2019-IV. **Provision Healthcare** has announced a $100 million proton therapy cancer treatment facility at the university Medical Center. Scheduled to open in 2019, this new site will employ 60 new people at $100,000 a year. Finally, construction has started on a new $250 million **Children’s Hospital**, a three-phase expansion on the LCMC Health System’s new campus.
Retail/Services Sector Enjoys Gains

The “feeder” sectors in the New Orleans MSA are experiencing notable action as the basic sectors expand. In the hotel sector, citizens are anxiously awaiting construction work on the $364 million makeover of the World Trade Center by Four Seasons. Construction is to begin in 2017-IV. Renovation and demolition permit applications have been filed. To be called 2 Canal Street, the new site will have 335 luxury hotel rooms and 80 hotel-serviced condominiums. The Jung Hotel on Canal Street is undergoing a $73.8 million renovation, and Mike Vera Hotel Development has finished two flag-ship hotels and has another under construction near the airport ($40 million in total construction).

Select Comfort is opening a new 225-person contact center in Kenner, and Deep South Studios is building a $63.5 million film production studio in Algiers (+30 new jobs). In Jefferson Parish, CarMax is spending $25 million on land and a building on a 25-acre site for its used car company (+350 jobs). Two large condominium/retail/hotel units are under construction in the downtown area. 1031 Canal is a $70 million residential/retail/hotel tower, and the $100 million The Ogden is under construction in the South Market District.

Public Construction: A Mixed Message

When it comes to public construction projects in this MSA, the message is more mixed. On the positive side, work will continue through February 2019 on the $993 million, 972,000 square foot, 35-gate new north terminal at Louis Armstrong Airport. The new terminal will have three concourses and a 2,190-car parking garage.

A $370 million expansion of the World War II Museum is projected to start in the Fall of this year and be completed by mid-2019. The site will add a 234-room, 10-story hotel and a 31,000 square foot Hall of Democracy with retail and exhibition space, classrooms, offices, and a library.

In St. Charles Parish a new $29 million Performing Arts Center is under construction for the public school system. In Orleans Parish, spending on public schools will be something of a roller coaster ride. After reaching $175 million in 2017, it will rise to $200 million in 2018, then drop to $120 million in 2019.

While all this is generally good news, there is not so good news coming from two quarters. First, the volume of state road lettings over 2018-19 will be $317.7 million, down 34% from the $478.6 million we reported last year. Finally, spending by the Army Corps of Engineers on its Hurricane Damage Risk Reduction System continues its relentless march downward, dropping from $970 million in 2015 to $256 million in 2019. The decline between 2017 ($659 million) and 2019 ($256 million) is a whopping $403 million (-61%). Too put this decline in perspective, it basically offsets all the gains from the renovation of the World Trade Center.
Baton Rouge: Anticipated Lull

In 2015, for the first time in its history, this MSA’s employment broke through the 400,000 level. There are now an estimated 409,100 jobs in this MSA, the second largest behind New Orleans. It is the largest MSA in the state in terms of numbers of parishes---nine, including East Baton Rouge, West Baton Rouge, Livingston, Ascension, Iberville, St. Helena, Pointe Coupee, East Feliciana, and West Feliciana (see Map 1). In terms of population, East Baton Rouge Parish was the most populous in the state in 2014 at 446,042 according to the Bureau of Economic Analysis.2

The author has been monitoring the Baton Rouge economy for 40 years. Never has this MSA experienced an industrial expansion like the one presently underway. As seen back in Table 2, there have been $15.9 billion in announced industrial expansions in this MSA since 2012. What differentiates this MSA from New Orleans and Lake Charles---sites of other major industrial announcements---is that in the Baton Rouge MSA almost all the announced projects ($15.7 billion) are either completed or under construction. This has important implications for this MSA going forward. The Baton Rouge MSA employment will likely enter a lull in 2018, as construction of virtually all of its projects comes to an end. The decline in construction employment will have an arresting effect on total employment in the MSA, especially in 2018.

Petrochemicals, Construction, Universities & Government

The petrochemical industry is a huge factor in this MSA’s economy. This MSA has the largest concentration of chemical industry activity in Louisiana. Between the three of them, East Baton Rouge, Ascension, and Iberville Parishes had 9,943 chemical workers in 2014. Baton Rouge is home of the nation’s fourth (and the world’s twelfth) largest refinery---ExxonMobil---located just north of the state capitol building. Placid Refinery is also located in this MSA.

Because the petrochemical industry is very capital-intensive, when it expands, so does the industrial construction. Industrial construction jobs are also closely tied to “turnarounds” at these plants, i.e., when the plants are shut down completely for scheduled maintenance. In July 2017 the Baton Rouge MSA had an unusually high 12.9% of its workforce (52,200 jobs) in the construction sector, the second highest percentage in the state. Only Lake Charles was higher at 21.9% (25,000 jobs). The comparable percentage for the whole state was 7.9%. Turner Industries, Performance Contractors, CB&I, the Newton Group, Brown & Root, MMR, EXCEL ISC Contractors, and Cajun Contractors are among the larger industrial construction companies in the area.

The Baton Rouge MSA also is the location of the State Capitol and the vast office complex associated with it. Two major state universities---LSU and Southern University---are located in Baton Rouge, along with one of Louisiana’s largest community colleges. Baton Rouge Community College is actually larger than Southern University in terms of enrollment.

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2 www.bea.gov
This MSA is also home to an emerging high tech sector, led by Electronic Arts game company and the large IBM facility.

**Recent History of Baton Rouge**

Figure 11 shows employment trends in the Baton Rouge MSA over 1980-17. This MSA was only mildly touched by the terrible recessionary years of 1982-87. Baton Rouge dropped 4,800 jobs or 2.2 percent of its workforce as compared to the 9 percent decline in the state as a whole over that same period. Note the distinct jump in the employment trend line in Figure 11 in 1990. This was due to the addition of five more parishes to this MSA by the Department of Labor.

![Fig. 11: Baton Rouge MSA Non-Farm Employment 1980-2017](image)

**The really good years:** The years from 1988 to 2000 were heady ones in the Baton Rouge MSA. This region had the most enviable growth record in the state in terms of both size and consistency. The MSA immediately recovered the 1982-87 losses with a banner year in 1988 when it gained 10,300 new jobs. Then the region’s employment went straight up for 13 straight years over 1988-00, adding a robust average of 7,500 jobs each time the calendar turned.

**The really weak years:** The tables decidedly turned against Baton Rouge over the next four years. This 9-parish MSA lost 3,900 jobs or 1.1 percent of its workforce in 2001 due to the
national recession—an unusually short and mild dip compared to what happened nationally. Its recovery from that dip was nothing like that of 1988. It took three years to recover the jobs lost in 2001, and those three years were ones of very modest growth as seen in Figure 11.

The culprit behind this slow growth pattern was the chemical industry. We have already pointed out the dominant role played by this industry in the MSA’s economy. The chemical sector was hurt by two factors. Initially, the national recession hit sales in this sector very hard and weakened considerably the price of chemical products. However, the second factor was in many ways the most problematic. High natural gas prices (see Figure 8) radically raised operating costs for these firms. Several chemical firms in the MSA announced layoffs or closed either temporarily, partially, or completely. The region’s ammonia fertilizer plants especially suffered.

The Katrina Effect

Evacuees in: Baton Rouge is the closest large MSA to New Orleans, so it initially absorbed a huge number of evacuees. From FEMA assistance applications, we estimate that the Baton Rouge MSA initially absorbed about 248,386 evacuees. This MSA’s population exploded by over 34 percent overnight. Traffic came to a standstill across the area, supplies vanished from grocery stores and gasoline stations, and every rental unit in the area was absorbed. There was a wild real estate period of about one month when realtors were selling more houses in a week than in the previous year. The median price for a single family home leapt 27 percent, the largest jump among the 151 MSAs surveyed by the National Association of Realtors. Sales tax collections in East Baton Rouge Parish rose by 34 percent in September 2005.

Evacuees out: There was, of course, no way for the MSA to permanently absorb a quarter of a million people over such a short time span, if for no other reason than there were not enough jobs available to support that many people. For example, in November 2005, the traffic count on I-12 east of the I-12/I-10 split was up 22 percent over August 2005. By 2007 that count was up only 3.1 percent. On the I-10 bridge over the Mississippi, the count initially jumped by 26 percent, November over August. By 2007 that count was up only 2.9 percent.

More importantly, the Census Department made an estimate of the area’s population as of July 2007. That estimate showed the MSA’s 2007 population of 770,037 was up 39,921 over July 2005—a 5.5 percent increase. As seen in Table 4, the bulk of that population increase occurred in East Baton Rouge (18,121), Ascension (10,000) and Livingston (9,100) Parishes. The area clearly experienced an “evacuees in – evacuees out” phenomenon. A similar phenomenon was experienced in Hattiesburg, Mississippi and Mobile, Alabama.
Table 4
Population Change by Parish

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

Source: U.S. Census Bureau

Katrina boosted employment. Not only do the population numbers show that this MSA benefited from the storms, the employment numbers shown in Figure 11 confirm that as well. The employment line in Figure 11 took a distinct upward turn in 2005 and 2006. The MSA’s employment rose by 18,500 jobs or 5.4 percent over this period. Obviously such a rapid growth pattern could not be sustained long run.

2007: Construction Leads to a Strong Year

As seen back in Figure 11, the Baton Rouge MSA managed to continue the post-Katrina, torrid pace of adding 9,000-10,000 jobs a year. Incentivized by the Go Zone legislation, a massive amount of new construction work began in 2007.

2009-10: Impacts of the Great Recession

It is clear from Figure 11 that the Great Recession had an impact on the Baton Rouge MSA, though the region performed better than most in the country and the state. To repeat, the national economy began losing jobs in January 2008 and U.S. employment fell by 6.1 percent. By contrast, the Baton Rouge MSA did not lose the first job until September 2008, and it lost only 3.1% of its jobs. This was the second lowest loss of any MSA in the state.

The MSA was not without some serious job losses during the recession. For example:

- **Dow Chemical** in Iberville Parish closed one facility (-160 jobs) and laid off 400 contract workers.
- **Trinity Marine** closed its barge manufacturing facility in Port Allen (-190 jobs).
- **Capital One Bank** closed its call center at a cost of 180 jobs.
- **Chase Bank** closed its operations center, dismissing 247 people.
• **Wells Fargo** closed a call center, terminating 70.

• **IEM** moved its headquarters to North Carolina, taking with it 50 very high-paying jobs.

• **Excide Batteries** temporarily closed its shop, terminating off 132 people.

In addition to these announcements, budgetary shortfalls in **state government** led to layoffs in that sector of about 1,300 workers.

**Recovery from Great Recession Strong Despite State Government**

Recovery from the Great Recession in the Baton Rouge MSA has been getting stronger each year as seen back in Figure 11. Employment growth in 2011, 2012, 2013, 2014, and 2015 were 1.4%, 1.5%, 2.7%, 2.6%, and 2.2%, respectively. **By October 2012, the MSA had recovered all the jobs lost during the Great Recession** and began setting new employment records. This boom was largely led by the **massive industrial construction activity** associated with nearly $16 billion in new industrial projects under construction in the region. Indeed, construction employment in the region jumped from 37,500 in July, 2011 to 52,200 in July, 2017---a remarkable 39.2% increase in only six years.

The MSA accomplished this growth despite a couple of significant setbacks. First, the region lost 925 **call center and distribution center** jobs, including the 400-person Home Depot call center. Secondly, **state government** faced some serious financial challenges as a result of the recession and other factors. During his two terms Governor Jindal steadfastly refused to solve these budgetary issues by raising taxes, which meant cuts in government spending were the order of the day. As the state capital, Baton Rouge tended to bear the brunt of those cutbacks as seen in Figure 12. **Since 2009, state government has shed 4,500 workers** (-11%) in the Baton Rouge MSA. (Statewide, over that same period, state government employment fell by 30,600 or 26.2%.)

During the past two years the region lost two other significant employers and saw a major reduction in force by another. **Kellogg Distributors** laid off 208 people at its Gonzales site, and **Trinity Marine** closed its 288-person facility in Brusly. In August, **Albermarle** announced it was moving 200 jobs out of its service center---engineering, information technology, and logistics---in downtown Baton Rouge to Kings Mountain, North Carolina. For now the company is keeping its research development and manufacturing operations on Gulf States Road in the region.
Great Flood of 2016

There was another epic event that radically impacted this MSA’s employment numbers. The impact was so great that despite the strong industrial boom in the area, employment in the Baton Rouge MSA was actually flat in 2016. In August 2016 a relentless rain storm hit the area.

Figure 13 puts the rainfall numbers in perspective as compared to a 100-year and a 1,000-year event. For a 100-year event, 14.2 inches would be expected over two days, and for a 1,000-year event 21.3 inches would be expected. The next four bars in Figure 13 show the rainfall in communities in the Baton Rouge MSA. All four exceeded the 1,000-year event.

FEMA data in Figure 14 reveal that a remarkable 65,829 homes just in three of the MSA’s nine parishes were damaged by flood waters. Byproducts of this tragedy included (1) many workers not being able to get to work because of the attention required on their homes and (2) many businesses were closed---some temporarily and some permanently---due to flooding. An Advocate newspaper report indicated 410 of 1,766 businesses in Livingston Parish (23%) had not renewed their occupational license.

Note the impact on employment in this MSA as shown back in Figure 11. The MSA lost jobs in every month from August through December. It was enough to render employment in flat for 2016.
Fig. 13: 2-Day Rainfall Totals: August 2016

Inches

<table>
<thead>
<tr>
<th>Location</th>
<th>1,000 Year Event</th>
<th>100-Year Event</th>
<th>Watson</th>
<th>Brownfields</th>
<th>Denham Springs</th>
<th>Monticello</th>
<th>New Iberia</th>
<th>Lafayette</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3</td>
<td>14.2</td>
<td>31.4</td>
<td>26.8</td>
<td>25.5</td>
<td>24.0</td>
<td>21.5</td>
<td>20.8</td>
</tr>
</tbody>
</table>

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

Fig. 14: FEMA Verified Home Damage

Number of Homes

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBR</td>
<td>37,164</td>
</tr>
<tr>
<td>LIV</td>
<td>20,808</td>
</tr>
<tr>
<td>ASC</td>
<td>7,854</td>
</tr>
<tr>
<td>Total</td>
<td>65,829</td>
</tr>
</tbody>
</table>

Source: The Advocate Newspaper, August 8, 2017
Major Industrial Projects Completed in 2016-17: The Pickups Are Leaving

Construction of several major projects came to an end over the past two years. The largest was CF Industries’ $2.1 billion fertilizer plant near Donaldsonville. Dow in Iberville Parish completed work on a massive $1.06 billion project, and Methanex completed the $1.1 billion move of two methanol plants from Chile to Ascension Parish. Also in Ascension Parish BASF finished four new facilities at a cost of $500 million. At the Port of Baton Rouge, Genesis Energy completed its $150 million storage terminal for oil, intermediates, and refined products, while in Livingston Parish Epic Piping completed its $43.3 million pipe fabrication facility. Pepsi Cola opened its new 200-person distribution center in Livingston, just north of the Epic Piping site, in January 2017.

Each of these projects led to new high-paying, permanent jobs that the MSA did not have before. However, readers can envision hundreds of vehicles containing construction workers leaving these sites for the last time. This is the primary reason the MSA’s employment is entering a lull, with employment up 4,200 in 2017---less than half the rate of the boom years of 2013-15.

Forecast for 2018-19: The Lull Continues

Figure 15 illustrates our forecasts for the Baton Rouge MSA over 2018-19. We are projecting the region will stay in a lull through these two years as construction of more and more industrial projects come to a close. Employment is expected to rise by 2,900 jobs in 2018 (+0.7%) and by 3,300 jobs in 2019 (+0.8%). This performance would rank the MSA #5 among the nine MSAs in terms of percentage growth and #2 in terms of absolute growth over these two years. These lower growth rates can primarily be traced to the reduction in industrial construction in the region as many projects wrap up.

Industrial Construction Far From Dead

It would be easy to read the last several paragraphs and conclude there is little going on in this region from an industrial construction standpoint. That could not be farther from the truth. Several significant projects are still underway, generating hundreds of industrial construction jobs. For example:

- **Shintech** in the Plaquemine area continues to add to its presence in the state. The firm is in the middle of a $1.4 billion for an ethane cracker and connections to PVC and VCM production lines. This new unit will create 100 new high-wage ($68,500) jobs for the region. It will be completed in 2018-II, leading to another exodus of construction jobs. However, this construction job loss may be totally mitigated if the company continues its past expansion plans. Indeed, Shintech recently purchased the Carville site from Eurochem, suggesting that a favorable new announcement may be coming soon.

- In February 2016 Shell Chemical broke ground on a $717 million olefins plant that will create 20 new jobs paying $104,000 annually. The plant should be completed in 2018-IV.
• In Ascension Parish, **BASF** continues to expand at its 1,600-person site. Engineering is underway to double the firm’s MDI production. The $300 million project should start in 2018-II and be completed by 2019-IV.

• **NFR BioChem** has moved its Headquarters to White Castle and is building the first of a series of plants to convert bagasse into pellets for fuel for global power plants. A total of $312 million is to be spent on the plants, but there have been some problems with the construction of the pilot unit at the Cora Texas Mill in White Castle. The firm plans to hire 450 employees by the end of 2019, though we suspect that schedule has been pushed back by the construction issues.

• It is our understanding that **Shell** will begin construction of a $200 million LNG facility in 2018.

• In Geismar, **Air Products** is constructing a $150 million facility next to the Huntsman plant. Ten new jobs are associated with this new plant.
• In 2016-III Katoen Natie began construction on the first phase $36 million and 50 new jobs) of a multiphase, $159 million plastics storage and distribution center. Ultimately, the center will employ 210 people at an annual salary of $40,000.

• OxyChem has under construction a $145 million expansion in Geismar to produce materials used in refrigerants. Twelve high-paying ($80,000) jobs will be created.

• Also in Geismar, Praxair should complete in 2018-III a $100 million expansion to produce carbon monoxide.

• SE Tylose is nearing completion of a $120 million chemical plant on the Shintech campus. It will result in 30 new jobs.

• Union Pacific Railroad has two projects underway at the Port of Baton Rouge. One is an $11 million improvement to its interchange tracks (complete in 2018-II), and the other is a $23 million railcar chambering yard at the Port’s Inland River Marine Terminal.

• In January 2017, the Mauser Group began construction on a $10 million plant in Geismar that will manufacture industrial bulk containers. This facility should be open by the end of 2017 with 28 employees earning $58,000 a year. A second phase is being examined.

• Hood Container in West Feliciana Parish is spending $61 million to modernize a paper mill there, enabling the retention of 247 jobs.

A common thread running through the projects listed above is that most have construction work ending in 2018. This fits with the survey results by the Greater Baton Rouge Industrial Alliance (GBRIA) which are shown in Figure 16. Note than construction employment in the region is projected to decline from 21,496 in 2017-II to 18,317 by the end of 2018---a 3,179 job drop or a 15% decline. Of this decline, some 1,279 jobs are lost due to completion of new capital projects such as the ones listed above.

These job losses could be reversed if new projects come on line by 2019. A big project that is eyeing Ascension Parish---as one of several possible sites---is a $3-$4 billion plastics plant being considered by LyondellBasell. Methanex is examining the possibility of a third methanol plant ($600 million) in Ascension Parish. On a smaller scale, Thermaldyne is still considering a $19 million waste remediation facility in Port Allen that would hire 45 people at $70,000 per year. Of course, our busy and competent Department of Economic Development may be courting leads we do not even know about.
Port of Greater Baton Rouge: The Drax Effect

The Port of Greater Baton Rouge is in the midst of an enviable growth cycle as seen in Figure 17. Tonnage at the Port has more than tripled since 2012. When stalled on the I-10 Bridge, a glance to the South will reveal the new Louis Dreyfus grain elevator complex that has boosted grain exports from zero in 2012 to nearly 6.2 million tons in 2016. To the north is a view of two new spherical holding bins for wood pellets produced by Drax Biomass at its pellet plants in Pine Bluff, Arkansas and north Louisiana. Drax bought a plant out of bankruptcy in Urania, Louisiana, so its volume of shipments to---and out of---the Port will be growing even more. Ultimately Drax should generate about 40 more vessels a year calling at the Port.

Genesis Energy’s new petroleum storage unit is now operating, and as mentioned earlier, UP Railroad will be spending $34 million on its infrastructure at the Port. SEACOR AMH has constructed a new container-on-barge service at the Inland River Marine Terminal to move containers of chemicals by barge to New Orleans for shipments overseas.
Major Commercial Construction from Healthcare

Commercial construction in the Baton Rouge MSA will benefit from significant expansions in the healthcare sector. The largest project *Our Lady of the Lake’s* new $230 million Children’s Hospital. Construction started in early 2017 on this 350,000 square foot, 130-bed facility and medical office building. Completion should occur in 2018. *Providence Protoncare* is planning an $85 million proton radiation therapy center in Baton Rouge that would open in 2019 and hire 95 people at an average salary of $105,000. *Ochsner* is planning a $100 million investment in Baton Rouge, including a new medical office building and 10-bed micro-hospital and surgical center near the Mall of Louisiana. *Baton Rouge General (BRG)* announced two new projects for the region. One is a $30 million 10-bed neighborhood hospital in Prairieville that would also house a 60,000 square foot lab, 14-bed emergency room and physician office space. BRG’s second project is a $40 million expansion at its Bluebonnet site, which would add four floors, a helipad, and operating room space.

A Bump from Water and Roads

This MSA will get a lift from two public sector projects but will likely be hammered from another angle. On the positive side, *state road lettings* over 2018-19 will be up compared to last year. DOTD reports $425 million in state road projects as compared to $419.2 million last year. The top three projects include:
• $16.4 million to widen North Sherwood Forest from two to three lanes.

• $12.3 million to widen Sullivan Road from Wax to Hopper.

• $12 million to replace Bayou Manchac and François Bridges on US 61.

Secondly, work continues on the Water Campus in downtown Baton Rouge. Two buildings are completed and a third $25 million building housing the Water Institute of the Gulf (TWIG) is underway and will open in November, adding about 100 new jobs over two years. In 2018-I work should begin the $20 million “6A” building, and construction of a $7 million, 20-unit residential building will start about the same time.

While these are positive bits of news from the public sector, the fact remains that the Governor and Legislature have yet to find a solution to the $1.5 billion “fiscal cliff” facing them in the next few months. The Legislature has shown no inclination to solve this problem solely with tax increases. That means further cuts are a most likely scenario, so the line back in Figure 12 is likely to continue its trend downwards. More state employment cuts for the Baton Rouge MSA are almost a certainty.

More Gains in High Tech

Finally, Baton Rouge’s high-tech sector is on track to add even more jobs over the next two years. IBM is on track to reach its goal of 800 jobs by the end of 2018. A new job working with Cleco (described under the Alexandria heading) will boost business at IBM for the next two years. General Informatics has a beautiful new $20 million building (@Highland Building) underway at Highland Road and Bluebonnet. This firm recently acquired Teknarus and will be at 96 jobs.

Shreveport/Bossier: Is Haynesville Coming Back?

This MSA is now the fourth largest MSA in Louisiana with an estimated 179,200 non-farm jobs in 2017. Located in the northwestern corner of the state, this MSA is now comprised of four parishes---Caddo, Bossier, Webster, and DeSoto. Webster Parish is a recent addition to this MSA. All our employment numbers reflect the addition of this parish.

Shreveport-Bossier has the highest concentration of durable goods manufacturing employment in the state, and that tends to make the area much more susceptible to national recessions than Louisiana’s other eight MSAs. Among the large durable goods manufacturers in the area are Sabre Industries (formerly, CellXion and a manufacturer of cellular towers), Frymaster (manufacturer of deep fryers and similar products for McDonalds and KFC), Ternium---a steel components manufacturer, and Benteler Steel, the latter two housed at the Port of Caddo Bossier.
It is also home of the state’s largest and most successful casino market. This MSA now has six large river boat casinos plus the Harrah’s Racetrack, which together employed about 5,153 people in 2017-I. Bossier City is home for Barksdale Air Force Base, an employer of 9,155 military/civilian workers and an important economic driver for the area. Another big employer in the MSA is the LSU Health Sciences Center with 5,260 employees. The Caddo-Bossier Port is home to several firms including the Ternium steel firm, the Pratt recycling company, Ronpak, Sports South, and Benteler Steel. Altogether, tenants at the Port employ about 1,500 people.

This region was a huge beneficiary of an economic jolt from 2007 to about 2009 in the form of the Haynesville Shale—a very large deposit of natural gas. New fracking technology made possible the harvesting of this field. In 2008, exploration companies pumped $4.5 billion in new dollars, about $3.2 billion of that in the form of mineral lease payments, into the northwest section of the state. In 2009, that figure rose to $7 billion, of which about $1 billion was in the form of mineral lease payments. This largess radically reduced the influence of the Great Recession on this MSA's economy, as we will show below. We will also note a considerable tailing off of activity in the shale since 2010.

Shreveport/Bossier Recent Employment History

Figure 14 tracks the employment history of this MSA over 1980-2017. The Shreveport/Bossier area suffered through a prolonged, and deep, recessionary period from 1985-89. While this decline was partially a result of a badly declining exploration industry, that was not the main culprit.

1985-89: The AT&T effect. Both the depth and length (this MSA was the last in the state to begin the recovery process) of the recession was due to one firm. AT&T had a large phone equipment manufacturing facility in Shreveport that employed 7,450 people at its peak in 1984. The firm then began a major downsizing effort that ultimately dropped its employment to near 1,100. Those layoffs, combined with their negative multiplier effects, caused the MSA’s employment to decline by 8.2 percent.

Casinos to the rescue: In 1990, the Shreveport/Bossier area began a slow assent from the depths of its recession. Initially, job growth was positive, but anemic. Then in 1994, its employment began to rise rapidly---by an average of 4,600 jobs a year. The source was riverboat casinos. These casinos have been among the most successful in the state, because they have drawn heavily from the huge Dallas-Ft. Worth metroplex for their customers.

Casinos added jobs to the region in another important way as well---the construction of large hotels. Horseshoe Casino had a 25-story, 606-suite hotel; Casino Magic operated a 94-room, 94-suite hotel; and Isle of Capri operated a 300-suite hotel. These, of course, are pretty labor-intensive operations, so the MSA picked up a significant employment boost here as well.
Durable goods dependence & national recessions: The years 2001-03 were particularly difficult ones for this MSA. The MSA lost 3,900 jobs over this three-year period or 2.3% of its workforce. In percentage terms and in length, it was the worst decline in the state, not unexpected in a very durable goods-dependent region.

Several factors played a role in this rather poor record. First, there was the closure of some large manufacturing facilities in the area. In mid-2001, the Avaya Communications (formerly, Lucent Technologies) closed its Shreveport plant, costing the area 900 jobs. The Pennzoil Refinery was sold and dramatically cut back from 230 workers to only 85. Boeing closed its facility at the airport, terminating 162. Precision Response closed its 250-person call center in early 2001. General Electric began the process of transferring 400 positions at its industrial systems plant to another site in Monterrey, Mexico. These were permanent layoffs.

Too, the state’s most successful casino market took a hit as business declined with the recession. The area’s newest casino at the time, Hollywood, reduced its workforce from 2,200 to 1,800. Three of the area’s five casinos reduced employment due to the recession. Finally, a mixture of other firms, including Frymasters, Beaird, and Exide Technologies imposed significant layoffs in 2002. Beaird, in particular, went from a 700- to a 30-person workforce.
GM, Beaird, and Frymaster stop the fall: The Shreveport/Bossier MSA turned the corner in 2004 and grew for five years in a row, expanding at an average rate of almost 2% a year over 2004-08. Initially, General Motors was a key player in this recovery. GM opened its new facility and hired 600 additional workers to begin test-building of the Hummer 3 at its old site. Its employment in the region jumped from about 2,400 to 3,600. However, a round of employee buyouts in 2007 dropped employment at this plant back down to 2,153.

After taking over Beaird Manufacturing, the Eakin Company initially put that firm back on an expansion path. Employment at the location jumped from 30 to about 570. Frymaster came back at an all-time high employment level of over 600 employees. The new firm Steelscape (now Ternium)---a steel components manufacturer---opened at the Port of Caddo-Bossier, creating 240 new jobs in 2007.

Haynesville & Barksdale Mitigate the Great Recession

As mentioned earlier, normally this MSA is the hardest hit when a national recession hits because of its high dependency on durable goods employment. For example, note in Figure 18 that during the post 9-11 recession the U.S. economy lost jobs for two years by a total of 1.4 percent. In contrast, the Shreveport-Bossier MSA's employment fell for three straight years by a total of 2.3 percent.

When the Great Recession hit the result in Shreveport was almost turned on its head compared to past history. The U.S. economy began losing jobs in January 2008. Shreveport-Bossier did not lose its first job until 10 months later. The U.S. economy lost 6.1 % of its jobs; this MSA lost only 2.3 % and it only lost jobs in one year---the only MSA in Louisiana to pull that off. Instead of ranking dead last in the state, Shreveport-Bossier ranked 2nd in least jobs lost during the Great Recession.

Haynesville flips recession effects: There were two key factors behind this unusual performance. First and foremost was the tremendous amount of money pumped into the economy by Haynesville Shale exploration over 2008-09. As we indicated earlier, these funds amounted to $3.5 billion in 2008 and $7 billion in 2009, an immense injection of economic activity into the region's economy.

One indicator of how important the Haynesville Shale activity was during the Great Recession is shown in local government sales tax collections, which are illustrated for four northwest Haynesville parishes in Table 5. First note that during the last post 9-11 recession three of the parishes experienced declines in collections (we were unable to get the earlier data for Bossier Parish), just as normally happens in the face of a national downturn. However, despite the length and depth of the Great Recession, local sales tax collections rose in all four parishes over 2008-09, with unusually large increases in 2009 in Red River Parish (+205.1%) and DeSoto Parish (+82.2%).
Table 5
Sales Tax Collections in Selected North Louisiana Parishes

<table>
<thead>
<tr>
<th>Parish</th>
<th>Percent Change In Sales Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red River</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>-3.1%</td>
</tr>
<tr>
<td>2008</td>
<td>71.1%</td>
</tr>
<tr>
<td>2009</td>
<td>205.1%</td>
</tr>
<tr>
<td>DeSoto</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>-0.8%</td>
</tr>
<tr>
<td>2008</td>
<td>3.6%</td>
</tr>
<tr>
<td>2009</td>
<td>82.2%</td>
</tr>
<tr>
<td>Caddo</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>-0.8%</td>
</tr>
<tr>
<td>2008</td>
<td>7.0%</td>
</tr>
<tr>
<td>2009</td>
<td>1.4%</td>
</tr>
<tr>
<td>Bossier</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>NA</td>
</tr>
<tr>
<td>2008</td>
<td>4.1%</td>
</tr>
<tr>
<td>2009</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

Source: Author survey of parish finance offices

Similar findings occurred in property taxes collected in five Haynesville-impacted parishes as seen in Table 6. Not only did property taxes increase dramatically in all five parishes during the country's worst recession since the Great Depression, but also it is clear from the last two columns that almost all of that growth was energy-related. In Desoto Parish, property taxes increased by 3 ½ times. In Red River Parish the increase was almost by a factor of seven. The Haynesville Shale was a huge factor in the treasuries of these local governments.
Table 6
Property Tax Collections in 5 Haynesville Shale-Impacted Parishes:
2005 Versus 2013

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Desoto</td>
<td>$22,395,351</td>
<td>$78,432,531</td>
<td>18.9%</td>
<td>62.4%</td>
</tr>
<tr>
<td>Red River</td>
<td>$3,549,617</td>
<td>$21,927,425</td>
<td>3.6%</td>
<td>47.8%</td>
</tr>
<tr>
<td>Webster</td>
<td>$15,728,690</td>
<td>$25,342,948</td>
<td>17.1%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Bossier</td>
<td>$52,449,881</td>
<td>$97,054,727</td>
<td>8.5%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Caddo</td>
<td>$158,347,601</td>
<td>$230,350,740</td>
<td>2.8%</td>
<td>10.5%</td>
</tr>
</tbody>
</table>

Source: Louisiana Tax Commission

**Barksdale deserves some credit.** Of course, the awarding of the Global Strike Command to Barksdale Air Force Base also helped mitigate the impact of the Great Recession. By September 2009, 275 of the 900 jobs attached to the GSF had relocated to Barksdale. In addition to the Global Strike Force, Barksdale gained part of 700 positions it would ultimately secure via flight training jobs and the reopening of a weapons storage area that came to the MSA.

**Several closures still hit the area.** The gains from the Haynesville Shale activity and the additions at Barksdale did not mean the region escaped the recession unscathed. Consider the following:

- Problems at **General Motors** dropped its workforce from over 2,000 to about 800.
- **Capital One Bank** closed a 150-person call center.
- **Verizon** closed a 300-person call center.
- Market conditions turned against **Beaird Industries** in 2008, and it was closed at a cost of about 400 jobs.
- A weak U.S. housing market led to the closure of the **Georgia Pacific** plywood plant in DeSoto Parish (-280 jobs), and the firm laid off 400 at its plant in Springhill.
Recovering From the Great Recession: Not the Normal Pattern

Note back in Figure 18 that the Shreveport-Bossier MSA actually started enjoying job gains in 2010. The increase was only 400 jobs or about 0.2%, but this was the only MSA in the state to grow that year. The region also had a good year in 2011, adding 2,100 jobs, a very respectable growth rate of 1.2%.

This is the pattern one would normally expect to continue in a durable-goods-dependent economy---good solid growth on the recovery side of a recession. That, however, was not the pattern that has continued. Except for slight growth in 2010-11, the Shreveport-Bossier MSA has been in a decline since 2008, losing 13,500 jobs (-7.0%).

Several factors have contributed to this poor performance. First, the GM plant closed August 2012, costing the region 800 high-paying jobs. Area and state economic developers have been hustling to find a replacement at the GM site, something we will discuss in the forecasting section.

The Haynesville Shale has played a significant role in the first two years of this employment decline. After being responsible for shielding the MSA from much of the effects of the Great Recession, activity in this shale dropped precipitously. After reaching a peak of 142 rigs in April 2010, the rig count in North Louisiana plummeted to only 23 in July 2013---an 84% decline. Rig activity fell as low as 16 but has shown signs of a modest recovery as will be discussed later.

What caused this rig movement out of the Haynesville play? The answer lies in the rate of return on equity (ROE) data in Figure 19. Note that the ROI in the Haynesville Shale in 2010 was far lower than in the other plays shown. There are two reasons for this differential. First, the wells in the Haynesville are deeper than in these other plays, so it was costing more to drill a typical well---about $9.5 million per well in the Haynesville versus $6 million in the Eagle Ford or Marcellus Plays. Secondly, the Haynesville Shale is a "dry" play, i.e., when you drill you get only natural gas. In parts of the Eagle Ford, Marcellus, Woodford, Permian, and Granite Wash, exploration companies hit both natural gas and the more highly priced oil. The latter are "wet" plays. The Haynesville was simply at a serious disadvantage vis-à-vis other natural gas plays in the U.S.
A third factor holding back this region’s economy has been a reduction in forces at Barksdale AFB. The troop count which was 8,655 in 2012 dropped to 7,577. A 24-plane A-10C Wing was removed from the base in 2013. There were 500 jobs directly tied to that wing, but luckily about 400 of those were absorbed into the 307th Bomber Wing. Associated with all these reductions is obviously a reduction in spending in the MSA that contributed to the region’s poor job performance over 2012-15.

Another contributor to the recent decline is Libbey Glass. This firm reduced its workforce by 200 in early 2013, moving these jobs to Toledo and Monterrey, Mexico. Adding to the decline was the closure of the 250-person Express Jet maintenance facility at the Shreveport Airport in 2016.

Finally, competition with Indian casinos in Oklahoma has significantly eaten into Shreveport-Bossier’s gaming sector over the past few years. Note in Table 7 that this sector has shed 1,045 jobs between 2014-I and 2017-I according to data from the Louisiana Gaming Control Board.
Table 7
Shreveport-Bossier Gaming Employment
2014-I – 2017-I

<table>
<thead>
<tr>
<th>Company</th>
<th>2014-I</th>
<th>2017-II</th>
<th>Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diamond Jack</td>
<td>653</td>
<td>422</td>
<td>-231</td>
<td>-35.4%</td>
</tr>
<tr>
<td>Sam’s</td>
<td>1,086</td>
<td>778</td>
<td>-308</td>
<td>-28.4%</td>
</tr>
<tr>
<td>Horseshoe</td>
<td>1,212</td>
<td>1,089</td>
<td>-123</td>
<td>-10.1%</td>
</tr>
<tr>
<td>Margaritaville</td>
<td>1,070</td>
<td>1,046</td>
<td>-24</td>
<td>-2.2%</td>
</tr>
<tr>
<td>Boomtown</td>
<td>626</td>
<td>523</td>
<td>-103</td>
<td>-16.5%</td>
</tr>
<tr>
<td>El Dorado</td>
<td>1,187</td>
<td>1,093</td>
<td>-94</td>
<td>-7.9%</td>
</tr>
<tr>
<td>Harrah’s</td>
<td>364</td>
<td>202</td>
<td>-162</td>
<td>-44.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,198</td>
<td>5,153</td>
<td>-1,045</td>
<td>-16.9%</td>
</tr>
</tbody>
</table>

Source: Louisiana Gaming Control Board

Forecasts for 2018-19: Haynesville Back at Last?

Figure 20 pictures our forecast for the Shreveport-Bossier MSA over the next two years. This MSA is expected to reverse its recent trends and return to a much missed growth trajectory, adding 1,300 jobs (+0.7%) in 2018 and 1,500 jobs (+0.8%) in 2019. If achieved, this would rank Shreveport-Bossier as the 5th fastest growing MSA in the state and 4th in absolute jobs gained.

**Fig. 20: Shreveport-Bossier MSA Non-Farm Employment**
**Forecast: 2018-19**

- 2018: +1,300 (0.7%)
- 2019: +1,500 (0.8%)
- 5th Best % Growth
- 4th Best Absolute Growth
A Boost from Haynesville: “3 is the New 35”

A real jump start to the MSA’s economy should come from a source that has been much more of a drag for the past few years---the Haynesville Shale Play. After peaking at 142 active rigs in April 2010, the rig count nose-dived to only 16 rigs in June of 2016. Happily, a revival is underway in this play, with the rig count in July 2017 at 43 active rigs and rising steadily.

What is behind this revival? Perhaps the most important driver is location. The Haynesville Shale is geographically close to LNG export facilities in south Louisiana and also to pipelines that are exporting natural gas into Mexico. The latter is especially important because these exports are increasing exponentially (see Figure 21) as Mexico converts its electric power generation from fuel oil to natural gas.

**Figure 21**

![Chart: Exports to Mexico](chart)

A second help factor is positive public sentiment. As the Utica and Marcellus Plays have developed in the northeast, resistance to pipelines to move the natural gas has been very strong. This is at least partially because people in the region have little experience with pipelines and fear them. The Haynesville Play on the other hand is located in Louisiana, a state that has enough miles of pipelines to circle the globe 4 ½ times. Citizens are used to pipelines and do not fear their presence. There may be a lot of natural gas being found in the northeast, but getting it to LNG facilities and to Mexico is another matter altogether.
Thirdly, exploration companies in this play are behaving just as entrepreneurs have behaved in the other plays in the face of lower commodity prices. They have become more creative and more focused on more efficiently harvesting gas from the Haynesville. The new motto in the Haynesville is “3 is the new 35”. Using longer laterals and more proppants, drillers in this play can get out of three wells what used to take 35 wells back when the play was first being developed.

While the rig count is unlikely to reach 142 again, the groundwork is there for further bumps upward from the present 43 level. More activity in the Haynesville bodes well for the Shreveport-Bossier MSA.

More Gains from High-Tech

Like its sister cities in south Louisiana (Baton Rouge and Lafayette) this MSA is developing a significant high-tech sector. CSRA has the ribbon-cutting ceremony on its Integrated Technology Center in February. Presently at 500 employees, this unit is projected to be at 800 by mid-2018. The company opened a second customer service center and expects to add 300 jobs over two years. Ribbon-cutting on this building was in November 2016. A customer engagement center opened in December 2016 with 150 employees with expectations to double that number by 2019.

Eatel/Venyu is spending $20 million to build the first tier II data center in Louisiana at the old Selbert Department Store in downtown Shreveport. The company will retain 10 jobs and add 15 more. In July 2017, Network Communications began work on a $10 million facility that will add 20 new jobs.

Progress at the Port

The Port of Caddo Bossier remains an active player in this region’s economy with about 1,500 people employed within its jurisdiction. Benteler Steel---whose primary customers are in the oil and gas exploration business---started 2017 with 395 employees at its tube mill and projects that number will be at 450 by the end of the year. The hoped for revival in the Haynesville Play could generate an expected sales bump in 2018. Construction of Benteler’s $227 million mini steel mill will be subject to market conditions.

Steel producer Ternium (2017 employment at 168) has added a 4th crew of 18 operators and supervisors, and the company plans to add employees to its galvanizing line over 2018-19. Ternium has $5.9 million in capital expenditures on the drawing boards, including (1) a new paint warehouse, (2) revamping painting line controls, (3) insulation/ventilation improvements on the finished products warehouse, and expansion of the finished products warehouse.

Ronpak, which started at the Port in 2012 with 50 employees, now has triple that number and is enjoying 10-15% growth year-over-year. The company is looking to expand its footprint by adding Wendy’s, Walgreens, and Chick-fil-A to its customer base. Employment at the recycling company Pratt is holding steady at 132, and Sports South just finished an 117,000 square foot expansion and is working on an addition to Knapp Automation Tower.
(sortation/picking machine). Sports South’s employment is expected to be unchanged over 2018-19.

Particularly exciting news came in February for the Port when a Transloading Agreement was signed with a company that will significantly increase traffic on the Red River. The Port will now have barge traffic on a regular basis. Three important benefits arise from this new agreement. First it will result in more revenues for the Port. Secondly, increased activity on the river supports the drive for more dredging of the river. Thirdly, increased activity on the river supports the argument for a 12 foot draft for the river.

More Jobs for Barksdale & Road Construction

The MSA’s largest employer---Barksdale AFB---with 6,394 military personnel and 2,530 civilian employees is poised for modest growth over our forecast period. With a four-star (up from a three-star) general, General Robin Rand, heading up the Global Strike Command at the base more activity is expected at the base. About 200 people will be added as the Global Strike Command gets control over Nuclear Command Control and Communications. A $21 million Communications Squadron complex is at the design stage and should start construction soon. Looking beyond our forecast range, a $350 million weapons storage facility is being examined for FY20.

This MSA will get a little extra boost from the state road lettings over 2018-19. Total letting will be $182.4 million, a $29.6 million increase over last year’s report. Four of the bigger projects are:

- $24 million for LA531 overpass bridge replacement.
- A new $19 million rest area at Ida.
- $15.1 million to widen Swan Lake Road from I20 to Flat River.
- $14.7 million to overlay I20 from the Texas state line to near Monkhouse Drive.

Hyundai, Sabre, & Brentwood

After years of standing vacant, partial use of the old GM facility went to Hyundai’s Glovis America subsidiary. This company will be an inland distribution center for logistical staging, quality inspections and accessorizing for 75,000 Kia vehicles annually. Already operational, this site will employ 150 people at $31,760 annually.

In Bossier, Sabre Industries---which manufactures engineered structures for the utility and telecommunications industries---spent $1.6 million on an expansion and is adding 50 new jobs to its 16-person workforce. Brentwood Hospital spent $1.2 million on its facility. Presently at 400 employees, the hospital plans to add 150 more over the next 15 years.
Lafayette: Another Year of Higher Prices Critical

This MSA, located in south-central Louisiana (see Map 1), is composed of five parishes—Lafayette, St. Martin, Vermillion, Acadia, and Iberia. With the addition of the latter three parishes, Lafayette is now the third largest MSA in the state with an estimated 199,100 people employed in 2017.

A key to understanding this region’s economy is its geographic location. Located in an oil-rich area and not far from the coast, Lafayette became a prime spot to locate service firms, fabricators, and other companies that do business with extraction firms exploring South Louisiana and especially in the Gulf of Mexico. Consequently, like Houma, the Lafayette MSA is closely tied to all aspects of the oil and gas exploration industry.

The MSA derives 6.8% percent of its jobs directly from the exploration industry, the highest concentration among the state’s nine MSAs (the comparable number for Houma is 6.4%). (The statewide average is 1.6 %.) Countless other jobs in the MSA are tied to the extraction industry through the multiplier effect.

There are six deviations from this pattern. Stuller Inc. is a 1,250-person facility that is the nation’s largest jewelry settings manufacturer. Acadian Ambulance is another large employer in the area (1,360 employees) whose ties are not all directly related to the extraction industry, although the firm provides air-med helicopter services and offshore rig/pipeline safety training to the industry. This company also monitors over 200,000 alarms in 40 states and monitors businesses and houses via videos, eliminating the need for guards. A third, growing firm is the 58-person Schumacher Clinical Partners, which provides ER and hospital medicine doctors to hospitals in 23 states. LHC---one of the nation’s largest home-health companies---employs about 700 people in Lafayette and 10,000 across 26 states.

Fifth, Lafayette has a new and growing high-tech sector which we describe in detail in the forecast sector below. Finally, Lafayette is the home of one of the state's larger public universities—the University of Louisiana at Lafayette. Until the mid-90s this area also hosted the largest manufacturing employer in the state---Fruit-of-the-Loom---which had a huge facility near St. Martinville. That facility has been shuttered.

Recent History of Lafayette

Figure 22 displays the recent employment history in Lafayette and demonstrates vividly the close ties this MSA has to the extraction industry. When oil prices plummeted in the early 80s, so did the Lafayette economy. Remarkably, a fifth of the MSA’s jobs disappeared over 1982-87. It was the worst downturn in Lafayette’s recorded history. However, unlike similarly extraction-dependent Houma---which took 10 years to recover its losses from that recession---Lafayette came out of its “V” much quicker.
The key was diversification. In the late 1980s, the previously mentioned Fruit-of-the-Loom constructed very large facilities in the area and in a short period of time became the state’s largest manufacturing employer. By 1994, Lafayette had recovered all its lost jobs and began setting new employment records. (This phenomenon does not show up clearly in Figure 22, because of the adjustment in the makeup of the MSA in 1990.)

Soft gas prices in 1992 set Lafayette back a bit, but like Houma, the hit was nothing like the 1982-87 period. Surging employment at Fruit-of-the-Loom pushed employment up briskly for the next couple of years.

Then Lafayette entered a “bad news-good news” period. The bad news: As a result of the North American Free Trade Agreement, Fruit-of-the-Loom began a round of massive layoffs. The good news: Layoffs at Fruit-of-the-Loom coincided almost exactly with two important events. One was a jump in oil and gas prices that sent the exploration industry on a hiring binge. The other was a new entrant that both diversified the economy even more and was labor-intensive to boot—Stuller Inc. Stuller hired enough employees that it became the largest jewelry settings manufacturer in the U.S. Lafayette employment expanded right through the Fruit-of-the-Loom layoffs.
The year 1999 was a bad one for Lafayette. Oil prices fell to under $10 a barrel, and that sent the extraction industry into the layoff mode again. Forty-three hundred jobs disappeared from the MSA (see the decline for 1999 shown in Figure 22).

For the next two years, Lafayette was back in the growth mode, setting new employment records in 2001 when most other MSAs in the state were being depressed by the national recession. Help in this recovery came from two sectors. Several significant distribution centers, including the large Wal-Mart distribution center near Opelousas and Magnolia Distribution Center in Lafayette, opened during this period. Then in 2001, the MSA attracted the Cingular Wireless call center, which hired 1,200 employees.

Unfortunately, Lafayette experienced a big blow in November 2001 when Fruit-of-the-Loom’s Martin Mills plant was shuttered, terminating 1,300. By this time, the post 9-11 national recession was also impacting Stuller Inc., which laid off about 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. The combination of these events, coupled with a lackluster response of the extraction industry to high energy prices, kept this MSA in a funk (-2,500 jobs) for three straight years.

The Impact of Katrina & Rita

It is obvious from examining the 2005 and 2006 data points in Figure 22 that something special happened in this MSA in those two years. Non-farm employment spiked upward by 10,800 jobs or 8.2 percent over those two years. What caused this nice rebound in employment in Lafayette?

One factor was resurgence in the oil patch. The rig count rose 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.

Indirect energy effects: But a larger factor by far was the impacts of Hurricanes Katrina and Rita. These two storms impacted the Lafayette area in two broad ways. First, there were the spillover effects of the destruction of the offshore energy infrastructure. Both Katrina and Rita were very destructive to the energy infrastructure in the Gulf of Mexico. A total of 115 offshore platforms were destroyed and another 52 were damaged by the two storms. Underwater pipeline systems were also damaged. Lafayette is the home to several fabricators and oilfield service firms that garnered some of the repair work on these facilities.

Evacuee effects: Secondly, Lafayette became a home to many evacuees after the storms---about 34,336 by one estimate. Evidence from the Census Bureau suggests that Lafayette experienced the same population adjustment as Baton Rouge except on a smaller scale. Census data indicate that between July 2005 and July 2007, the Lafayette MSA population increased by 9,033---a heady 3.7 percent increase in only two years.
2007 to Early 08: $140 Barrel Oil Pumps Up the Region

Data indicate that the employment growth rate slowed from about 5,400 jobs a year in the previous two years to a slower 4,000 jobs a year over 2007-08. Still, this represented a very healthy growth rate of 2.8 percent a year—second only to Houma among the state’s eight MSAs.

This slowdown was partially due to the completion of much of the Gulf of Mexico rebuild effort, but also, Morton Salt closed its 197-person facility at Weeks Island in 2007, one of the few bits of negative news coming out of this region. That was somewhat offset by the Nucomm call center coming to Lafayette in 2007, adding 500 new jobs.

Growth in 2008 was initially spurred by a very robust oil patch as oil prices reached record levels in the fall of 2008, and natural gas prices were unusually high as well. Also, Acadian Ambulance built a $15 million expansion that led to 300 more jobs.

High Energy Prices and Job Declines in Lafayette

A problem arose near the end of 2008. After peaking at $132.61 a barrel in September 2008, the price of oil began a rapid, but temporary, slide down to a bottom of $39.06 in March 2009. Employment in the Lafayette MSA responded as it always does to declining oil prices. The state rig count fell from the 190 level to near 170. The MSA began recording job losses in the latter half of 2008.

But there was another factor in the MSA’s employment decline. Beginning in April 2009 oil prices began to rise again and were at a very profitable $46.72 by May 2009. By August 2009 oil prices were over $70 a barrel, where they stayed well above that level through mid-2014. Despite these unusually high and very profitable energy prices, the rig count in south Louisiana continued to fall. For example in August 2008, when oil prices nudged $140 a barrel, the rig count in south Louisiana (land and water) was 56 rigs. It fell to only 30 rigs in August 2009 despite very high oil and natural gas prices. As seen in Figure 22, the Lafayette MSA lost jobs in 2009 and 2010—a total 2-year decline of 4,400 jobs (-3%). We are unaware of any other time in the history of the Lafayette economy when energy prices were this high and the economy actually lost jobs.

We believe there are two factors behind this poor behavior. First, our conversations with decision makers in this field and region indicate that President Obama’s proposed $36 billion tax on the extraction industry sent a chill through this sector and pushed down the rig count despite the presence of higher and very profitable oil prices. We gave a detailed analysis of this tax proposal in the 2010 LEO. This tax was proposed in President Obama's FY10 budget, but Congress was so absorbed in the healthcare debate that this legislation did not come up for debate. However, the administration continued to promote it, so the threat to the industry still lingers. Of course, a second factor was the difficulties associated with the BP oil spill.
Recovery from the Great Recession: From Unbelievable to Believable Numbers

The Lafayette MSA has had a very healthy recovery from the recession, adding 14,200 jobs (+6.9%) over the four years from 2011-14. It is important to note the fact that this MSA (1) was the first to set new employment records (in September 2011) after the losses incurred during the Great Recession and (2) had the best recovery record of all nine MSAs over 2010-14.

2015-16: Ogre of Low Oil Prices Raises Its Ugly Head

Unfortunately, it was Lafayette’s lot to face another down cycle in oil prices. The decline from $105.71 a barrel in August 2014 to a low of $27.76 in January, 2016 has had its usual effect on the very oil-dependent Lafayette MSA. Even with oil prices recovering into the $50 a barrel range, employment losses in the Lafayette MSA continue to mount.

Among the recent causalities was the closure of Chevron’s Shelf Office (though the firm is maintaining an Emergency Response Center in Lafayette). Baker Hughes closed a cement and pumping division in Crowley that employed 200 people at one time. Blue Sky Innovations—a firm providing support to helicopters servicing offshore work—shed 58 jobs. At the Port of Iberia, Dynamic Industries completed the module for Shell’s Appomattox Platform and dropped its workforce from 500 to 350.

As seen back in Figure 22, we are estimating the region will be down 23,500 jobs (-10.6%) over 2015-17 as compared to 2014. By way of reference, during the period labeled the “Great Recession” in the U.S. over 2008-09 the nation’s employment fell by 6.1%. The hit to Lafayette (so far) is 75% again worse than the Great Recession. Note back in Figure 22 that the decline in the early 80s was actually worse (-19.4%), but Lafayette had still taken one bad lick.

There is at least a glimpse of good news back in Figure 22. Listed in red are the annual-rate employment decline numbers for the first seven months of 2017. In January, the MSA was losing jobs at a 9,100 annual rate. This decline rate has steadily dropped to only 1,700 jobs in July. It appears from these numbers that Lafayette is nearing the bottom of the trough of this cycle. Will the bottom be reached in 2017? We turn to that topic next.

Forecast for 2018-19: Desperate Need for Higher Oil Prices

The nature of the recovery in the Lafayette MSA economy largely boils down to one question: “When will drilling in the Gulf come back?” Most analysts agree that exploration companies need the signal of a sustained, higher oil price to initiate a new round of drilling in the GOM. They need our oil price projection back in Figure 6 to materialize. They need to become comfortable that prices can be depended on to drift upward towards $60 a barrel by the end of 2019.

That “become comfortable” phrase in the prior sentence is the key to understanding our forecast for the Lafayette MSA. We do not believe another year (2018) with oil prices in the $50s will be enough to generate that comfort. Our forecast are Lafayette will continue to lose
jobs in 2018—though at a much lower rate (-800 jobs or -0.4%), before starting up the other side of the hill in 2019 (+1,600 jobs or +0.8%). This track of employment is illustrated for the reader in Figure 23.

**Stability at Best among the Big Four**

To its credit, this region’s efforts at diversification have paid off during this rough spell. Four large employers, with only tangential attachment to the exploration sector, are lending some stability to the region. **Acadian Ambulance** is now at 1,360 employees in the Lafayette region and expects that figure to hold up through 2019. The firm employs 2,340 in Louisiana and has picked up call business due to Medicaid expansion. Sales at **Stuller Inc.** were up 6-8% in 2017 and the company is expecting double digit gains in 2018 due to a new catalogue sales effort. Stuller may add as many as 50 new jobs over 2018-19.

**Schumacher Clinical Partners** provides ER personnel and hospitalists in 40 communities across the country. The company employs 568 at its Lafayette location, a number
not expected to change over the next two years. LHC employs about 10,000 people across 26 states, but does not expect its 700-person head count in Lafayette to change any time soon.

Some Help from High-Tech

Another diversification win for this region has come via the high-tech sector. The employment news going forward is somewhat mixed from this sector. On the positive side, CGI—the new information technology company at the ULL Research Park---is in its new $13.1 million building and at 300 employees, is ahead of schedule. CGI plans to add 100 more jobs by 2019. Waitr is another success story for Lafayette. Waitr is an online and mobile solutions company that partners with local restaurants to provide home delivery. It has 4,000 employees in 20 markets. At last count about 200 of those were in Lafayette. We anticipate more success and more jobs in Lafayette from Waitr.

Not so happy news emits from two companies mentioned in last year’s LEO. Both Proficient and Enquero are not on their previously reported hiring schedules.

Mixed Signals from Manufacturing

As one might expect, many of the region’s manufacturers, especially fabricators with close ties to the extraction industry, continue to suffer through this downturn. At the Port of Iberia, Dynamic Industries has completed work on Shell’s module for the Appomattox Platform and reduced its labor force from 500 to 350. Fortunately, that number should remain stable through our forecast period because the firm was awarded a contract for 92 different process modules for Shell’s Franklin Project in Pennsylvania. Bayou Coating just completed $14 million in flow lines for the Appomattox Project and expects to maintain its 360-person workforce. More uncertain is the outlook at Omega Fabricators, which finished constructing the pipeline end terminals for the Appomattox. The firm employs about 100 now and is looking for more work.

At Acadian Airport, Haliburton completed its $68 million facility and was recently awarded the completion work for the Appomattox Project. The company is beginning construction of a new $5 million building to house tools for the Appomattox Project. Haliburton has 500 employees at the site and expects stability in that number. At the Lafayette Airport, Bell Helicopters has been in the development stage for the 525 Relentless Helicopter---Bell’s largest and newest helicopter. Employment was at 25 during this development sage, but anticipates being at 90 by the end of 2019 as the aircraft goes into assembly.

Roads Will Add a Punch

Finally, this region will get a bit of a lift from an uptick in state road letting. This year the DOTD reports $350 million in state road lettings for the Lafayette MSA, up from $278.9 million last year. Among the larger projects are:

- $101.8 million to widen I10 from LA328 to LA347.
$21.4 million to replace a bridge on US90 at LA14.

$10.5 million for a new interchange at Ambassador Caffey.

**Houma: Another Year of Higher Prices Critical**

The Houma MSA is composed of two parishes---Lafourche and Terrebonne---and this is one of the MSAs whose composition did not change when the Census Bureau generated new MSA designations. Located in the south-central coastal area of the state (see Map 1), Houma is highly dependent on the oil and gas extraction industry and the spillover sectors---machinery, fabrication, shipbuilding, water-borne transportation---that feed off of extraction activities.

In July 2017, 6.4% of the MSA’s employment was directly in oil and gas extraction, four times the statewide average of 1.6%. The key word in that last sentence was "directly". There are many fabricators and shipbuilders in the MSA that cater almost exclusively to the extraction industry. Chief among these is Edison Chouest a firm that owns some 250 supply boats servicing the offshore industry and large shipyards that manufacture and service these ships. Bollinger Shipyards is another huge shipbuilding player in the region, though the firm focuses its efforts in the Houma area on a significant Coast Guard contract. Thomas-Sea is a 350-person shipyard presently diversifying into non-oil and gas work. Many of these ships operate out of Port Fourchon, basically a small city on the Gulf, which services about 90 percent of the offshore platforms and drill ships in the Gulf of Mexico.

Numerous fabricators work out of this region, one of the larger being Gulf Island Fabricators (1,000 employees). Other significant fabricators are Danos, with 100 workers at its headquarters in Houma but 1,700 company-wide, and Chett Morrison (350 employees). All the fabricators are busy trying to diversify into non-oil and gas related work.

**Houma’s Recent History**

Figure 24 tracks the non-farm employment history of this MSA over 1980-2017. What strikes an observer most in this graph is the unusually wild fluctuations in the region’s employment over time. Because of its heavy dependency on the extraction industry (the second heaviest of any MSA, behind Lafayette), wild fluctuations in energy prices over the past 37 years have dramatically impacted Houma. The influence of energy prices can be seen in the big “V” and the little “Vs” shown in this graph.

**The BOOM years:** The first, and biggest, “V” occurred after one of the greatest bull runs for any MSA in Louisiana history. From 1975-81, this MSA enjoyed a remarkable period of growth in response to oil prices that peaked at $37.50 a barrel for Louisiana crude in 1981. That would be about $109.52 a barrel in today’s prices.

**The BUST years:** A big “V”---covering the period from 1981-91---followed this boom period. The marked decline in oil and gas prices between 1982 and 87 sent this region into a free-fall. Some 17,200 jobs or nearly a quarter of the workforce vanished. Car dealerships,
restaurants, banks, and any retail establishment suffered through a terrible period as the MSA shed a quarter of its jobs. Houma was the worst hit MSA in the state by this recession. It took a decade for Houma to recover all the jobs lost during this dramatic downturn.

**The long road back:** When oil and gas prices recovered somewhat from 1987-91, this metro area rose up the other side of the “V”. Exploration activity in Louisiana has 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 ideal site from which to launch offshore exploration.

**The little “Vs”:** Still, every time energy prices got soft, Houma’s employment declined. The MSA lost 1,500 jobs in 1992 when natural gas prices declined as a result of two straight unusually warm winters, and it lost 3,100 jobs in 1999 due to low oil prices. Interestingly, Houma went through the post-911 U.S. recession unscathed. In fact, the MSA picked up 5,000 new jobs over 2001-02 when most of the other regions of the state were in absolute decline.
Note in Figure 24 that the “Vs” have been getting more and more shallow. This is primarily because the extraction industry is running much leaner now and has learned not to respond too strongly to rising energy prices. The firms that lend money to extraction firms have learned the same lesson.

Still it is important to note in Figure 24 that there has always been a left side to the “V”. That is, after energy prices have remained high for an extended period, the extraction industry has always responded by returning to the oil patch to take advantage of the higher prices. At least that was true until 2004. Response to the run up in oil and natural gas prices at that time was more tepid than expected in 2004, with little change in the rig count. In fact, Houma was the worst performing MSA in Louisiana in that year.

**Legacy lawsuit effects:** We believe this poor response resulted from industry fears generated by “legacy” cases, in particular the Corbello case. In the time since the Corbello case, the industry has been lobbying hard for tort reforms to correct their perception of abuses arising out of the Corbello case. A degree of success has been achieved. One of the factors that made the Corbello case so onerous to the industry was that much of the settlement was based on allegations that drilling had impaired the ground water supplies. The great majority of the Corbello award was for this damage, and the plaintiff could simply pocket the award and was not required to use the award to correct the problem. Act 1166 required that if damage was alleged to have occurred to a water aquifer, the award must be used to correct the problem. That eliminated a lot of the incentive for suing extraction companies.

Secondly, in the *Terrebonne Parish School Board v Castex* case the School Board was suing to require the oil company to backfill canals that were dredged years ago. This was especially troubling to the extraction companies because there are thousands of miles of these canals across the southern part of the state and the cost of filling them would be astronomical. The Louisiana Supreme Court over-ruled this judgment and said firms cannot be required to backfill a canal unless it was specified in the initial contract to drill. It was also determined that when permission is given to drill, there will always be a “footprint” that will be left that is reasonable to that activity. If the footprint is excessive and not reasonable to that activity, the landowner has a right to sue. Despite the reforms and legislation passed in the regular session of the State Legislature during 2006, several legacy lawsuits are still active in the state.

**The Katrina & Rita Effects**

Like Lafayette, Houma received a nice injection of activity as a result of the two hurricanes. **Over the three years of 2005-07, Houma gained a whopping 12,400 jobs, a remarkable increase of 14.9 percent or 5 percent per year.** It was the fastest growing area of the state. In fact, growth in Houma was so strong that in 2007, Houma moved past Lake Charles to the fifth largest MSA in the state. Effects of the recent oil price drop, coupled with an industrial boom in Lake Charles, has moved the latter MSA back above Houma again.

The source of this employment reversal is much the same as occurred in Lafayette. First, there was finally a **response in the oil patch to higher oil and natural gas prices.** As an MSA
heavily laden with exploration companies, oil service firms, and shipbuilders for the offshore sector, Houma benefited from this resurgence. Too, this MSA is home to many fabricating and repair/maintenance firms that benefited from the rebuild effort of offshore energy infrastructure that was damaged by Katrina and Rita.

Finally, Houma also benefited somewhat from an influx of evacuees. Houma, at 58 miles, is the closest MSA to New Orleans (Baton Rouge is 79 miles from New Orleans). Based on FEMA assistance applications, we estimated that this MSA’s population ballooned upward by 62,810 people in the first two weeks after Katrina---second only to Baton Rouge in attracting evacuees.

However, like Baton Rouge, Houma experienced the same population adjustment as did Baton Rouge and Lafayette. Census Bureau data show that between July 2005 and July 2007, the Houma MSA population increased by 3,449 people or about 1.7 percent. This is slightly more than the MSA tends to grow anyway. Thus, there was an exodus of evacuees from the MSA, but a number remained there as new residents, giving a bit of an extra boost to the retailers, real estate firms, and service providers in the area.

2008-09: High Energy Prices & Job Losses??

The experience in the Houma MSA over these two years pretty much mimics that of the Lafayette MSA. 2008 started out strongly as oil prices climbed to a high of $132.61 a barrel in September 2008. Then the price of oil began a rapid slide down to a bottom of $39.06 in March 2009.

Beginning in April 2009 oil prices began to rise again and were at a very profitable $46.72 by May 2009. Oil prices continued to rise through 2013 and the first half of 2014 as seen back in Figure 6.

However, despite these very profitable energy prices, the Houma MSA was the first MSA in the state to begin losing jobs during the Great Recession---recording its first job loss in August 2008. Over 2009-10 the MSA lost 4,800 jobs---a 4.9 percent decline---ranking its performance 6th among the eight MSAs in the state. It is historically unprecedented for this MSA to be losing jobs in the face 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, Gulf Island Fabricators and nearby J. Ray McDermott laid off workers in 2009, and Offshore Specialty Fabricators laid off 90 workers that year.

2011: Oops - Forgot about BP

In our 30 years of producing the Louisiana Economic Outlook, few things have surprised us more than the performance of the Houma economy in 2011. In the LEO released in the fall of 2010---six months after the oil spill and in the middle of the moratorium on drilling---we projected significant job losses for the area. Eleven deepwater drill ships left the Gulf, and
activity at Port Fourchon dropped 35-40% below pre-spill levels. Normally, that would translate into a major decline in employment in the MSA.

What we failed to take into account was the massive amount of money that BP would pump into the area's economy for the cleanup effort and to pay out on claims for losses due to the spill. While we do not have a good handle on the cleanup spending (which we know was quite large), we do have relatively good information on the amount BP paid to businesses and individuals who claimed losses due to the spill.

As of August 2011, **BP had paid out $132.1 million in claims in Terrebonne Parish and $81 million in claims in Lafourche Parish.** As a reference point, that is about 3.1% of Terrebonne Parish personal income and about 2.1% of personal income in Lafourche Parish. The combination of BP's cleanup expenditures and its payouts to claimants was sufficient enough to overcome slowdowns in exploration and cause a very modest 100-job loss in 2011 instead of the 1,500-job loss we predicted in the 2011-12 LEO.

### 2012-14: Strong Bounce Back

As seen back in Figure 24, the years 2012-2014 were very good years for the Houma MSA. The MSA added 8,700 jobs over those three years. That is an average growth rate of 3.1% a year, an enviable achievement compared to most MSA’s in the country. Its growth rate in 2014 was 2.1%---tying Lafayette as the third highest among Louisiana’s nine MSAs. Only the exceptionally booming Lake Charles and Baton Rouge MSAs performed better. Note in Figure 24 that (1) **in 2013, the Houma MSA blew past its previous employment peak of 2008 and (2) in 2014 the MSA crossed the 100,000 employment mark for the first time in its history.**

The comeback in the Gulf is largely responsible for this surge. Not only did exploration activity return and surpass its previous peak, but also Gulf Island added several hundred workers and Chouest's new shipyard, LaShip opened and grew to 1,200 employees. The major port servicing the offshore industry, Port Fourchon, turned from retrenching to bustling. It was a very good three years indeed.

### 2015-17: Sliding Down another “V”

It is a tough situation when an economy is tied so closely to a commodity and that commodity’s price fluctuates in a most unpredictable way. Such is the lot of the Houma MSA. The oil price decline since 2014 has sent this economy into another slide down the “V” and this has been a bad one. In the last three years, Houma has lost 16,700 jobs, a 16.4% decline. **This is more than 2 ½ times worse than what U.S. employment experienced during the Great Recession over 2008-09.**

The hammer fell on a number of companies in the region. **Edison Chouest** dropped employment at LaShip from over 1,000 down to 500. One hundred of the company’s 250 ships are stacked and its mariners are working about half the time as before the collapse. At **Chett Morrison** employment declined from 515 to 350. **Baker Hughes** closed its 50-person wireline facility, and **Hercules Offshore** laid off 50. **National Oilwell Varco** closed its facility in
Houma at a cost of 80 jobs, **CCHI Aviation** in Galliano closed its facility laying off 74 pilots, mechanics and support staff, and **Offshore Specialty Fabricators** began layoffs in May 2016 that cost 67 jobs. The bloodbath has obviously not been confined to the direct oil and exploration companies but also to tangentially connected companies as well.

Back in Figure 24 the month by month annual rates of decline for the first seven months of 2017 are shown in red. It is encouraging to note that in January, the Houma MSA was losing jobs at a -6,500 person rate, but that rate has declined to a point where by July the rate was -2,800. Houma appears heading for the bottom of the trough. How close is the bottom? We turn to that question next.

**Forecast for 2018-19: Send Steadily Rising Oil Prices!**

The story for Houma’s future is much the same as Lafayette’s. Both regions’ economies are intricately tied to activity in the Gulf. Solid recovery in the Gulf requires exploration companies being comfortable with oil prices stabilizing in the mid-to-high $50s range. Recall our oil price forecast back in Figure 6 allows for just this pattern to occur. However, we believe it will take another year of gradually rising prices to generate the “comfort” necessary for a meaningful revival in the Gulf. Consequently, note in Figure 25 that our forecast for the Houma MSA calls for another year of decline in 2018---though at a much slower rate (-1,800 jobs or -2.1%)---followed by the beginnings of a recovery in 2019 (+700 jobs or +0.7%).
The Shipbuilders: Another Hit from Chouest?

A key difference between the Lafayette and Houma economies is the presence of several significant shipbuilders in the Houma region. In the days of high oil prices, this sometimes gives Houma a distinct advantage over Lafayette. In times of low oil prices conditions are quite the opposite.

It is this “shipbuilder effect” that leads to a more difficult year in 2018 in Houma compared to Lafayette. Eyes should be particularly focused on Edison Chouest (EC), the largest shipbuilder in the area. EC has 14 tugs, four barges, and 12 platform supply boats under construction now at its shipyards. The company’s “survivor yard” is LaShip where employment has already fallen from over 1,000 to 500. This yard is unlikely to shut down. The same cannot be said for EC’s North American Shipyard, presently employing 500-600 people. Absent resurgence in the Gulf, this shipyard may be padlocked. Our 2018 forecast for this MSA has such a possibility built into it. The company’s repair yard at Port Fourchon (less than 100 workers) is expected to remain operative.

At Thomas-Sea Shipyard employment is now at 350 an expected to remain there for the next two years. Thomas-Sea is diversifying into non-oil and gas related work, such as blue and brown water tug and barge repair, repair work for the Coast Guard, and Pacific Coast fishing trawlers. The company is bidding on a Navy contract that if awarded could add 150 to its workforce.

Adding some solidity to the shipbuilding sector in Houma is Bollinger Shipyards. The company’s main yard has a 58-boat contract with the Coast Guard to build Fast Response Cutters. This will keep Bollinger’s 800-person workforce busy through 2024. The company’s 150-person repair yard at Port Fourchon is projected to remain stable through 2019.

The Fabricators: Good News at GI?

Virtually all fabricators in this region have lost significant business during the gulf downturn. Gulf Island Fabricators (GI) is an exception. Now back up to 1,000 employees, GI has diversified away for oil and gas and into a variety of other areas. The company has probably received the most press in its history from building 93-108 foot tall offshore windmill jackets for placement in the Atlantic in the northeast. The company has a contract with Oregon State University for a Regional Research Class Vessel, with options for a 2nd and 3rd vessel subject to Congressional approval. The company is also into shipbuilding for brown waters, military work, and river cruise vessels.

Danos’ site in Gary recently landed a new contract with Hess Oil for work on that company’s Stampede tension leg platform that will keep 100 workers there busy. Danos’ 100-person headquarters is in Houma and should stay stable through 2019. With 1,700-1,800 employees company-wide, Danos has a large component managing shelf and deepwater assets and has enjoyed a significant uptick in work in the Permian Basin doing maintenance and upgrade work on midstream oil and gas gathering systems.
Port Fourchon and Energy World

A real shot in the arm for this region may come soon at Port Fourchon via Energy World. Energy World has announced intentions to build an $888 million LNG export facility at the Port on 150 acres on the west side of Belle Pass (see the blue area in the lower left hand corner of Map 2).

Map 2
Port Fourchon
Energy World would use the LNG to run its own power plants in the Philippines. The company recently completed a pre-filing with FERC for the project. The fact that the company will be using its own product enhances the probability that the project will actually be built. An $888 million injection into the struggling Houma region would certainly be a welcomed event.

Port Fourchon is spending $90 million over 2017-18 to develop Slip D and is seeking permission from the Army Corps of Engineers to dredge the Port to 30 feet so larger vessels can be accepted. In the face of the moribund Gulf, the Port has extended its 20% rate reduction to clients and is offering 15 instead of 10 year terms on leases to add more predictability for these clients. One hopeful indicator that firms have not given up on the Gulf is the recent signing of three new leases at the Port: (1) Oceaneering—a subsea services company, (2) FCC Environmental—dealing in oilfield waste disposal, and (3) Omni Energy Services Corporation, a tank cleaning business.

Another exciting project at the Port is the planning underway to develop Fourchon Island, the area shown in yellow at the bottom of Map 2. The plan is to develop this area into a deepwater rig repair and refurbishment site, an activity missing from ports in Louisiana. The Port has the right of first refusal on the land, and the Army Corps is now 1 ½ years into studying the project. Dredging Belle Pass to 35-50 feet will be important to this project.

State Road Down Significantly

Finally, it should be noted that this region’s economy will not be helped by the data on state road project lettings. At $90.2 million last year, this number has dropped to $54.4 million over 2018-19—a 40% decline. The largest project on the list of lettings is $16.7 million to replace the Company Canal Bridge at LA24 and LA316.

Lake Charles: Like Secretariat – Wins by 31 Lengths

Located in the far southwestern corner of Louisiana (see Map 1), the Lake Charles MSA is composed of two parishes—Calcasieu and Cameron. This MSA is dominated by three industries. One is what is broadly referred to as the petrochemical industry. This phrase handily combines two closely related industries—chemicals and refining (the latter includes LNG export terminals). The Lake Area Industry Alliance reports that Calcasieu Parish was the home to 16 different chemical plants, two refineries, one LNG export facility, and three industrial gas processing plants. Total employment in these facilities was 6,180 direct employees and 3,656 contractors in 2014 according to the LAIA. Like the Baton Rouge area, this huge capital-intensive petrochemical complex supports a very large industrial construction industry.

A second major industry in Lake Charles is gambling. Pre-Rita, Lake Charles was home to five riverboat casinos. Now there are three in operation, plus the Delta Downs Racetrack. The two largest operational casinos are L’Auberge du Lac, which opened in the summer of 2005, and the Golden Nugget, which opened in December 2014. Hurricane Rita badly damaged both of the casinos owned by Harrah’s. Harrah’s sold its two licenses to Pinnacle Entertainment,
owner of L’Auberge du Lac. Pinnacle moved a license to Baton Rouge. **Isle of Capri** closed one of its smaller riverboats and moved that license to Shreveport.

It is interesting to note that while the gaming sector in the Shreveport-Bossier MSA has declined over the past three years, in the Lake Charles MSA it has grown, as seen in Table 8. **Total employment at the three casinos and the racetrack was at 5,779 as of 2017-I---a 41% increase over three years ago.** Mainly this was due to the opening of the Golden Nugget in December 2014. While this new casino did cannibalize some from the other three gaming venues in the area, on the net the region’s gaming market was way up.

### Table 8

**Gaming Employment in the Lake Charles MSA: 2014-I to 2017-I**

<table>
<thead>
<tr>
<th>Company</th>
<th>Employment 2014-I</th>
<th>Employment 2017-I</th>
<th>Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Golden Nugget</td>
<td>0</td>
<td>2,191</td>
<td>2.191</td>
<td>NA</td>
</tr>
<tr>
<td>Isle of Capri</td>
<td>1,044</td>
<td>927</td>
<td>-177</td>
<td>-11.2%</td>
</tr>
<tr>
<td>L’Auberge</td>
<td>2,285</td>
<td>2,016</td>
<td>-269</td>
<td>-11.8%</td>
</tr>
<tr>
<td>Delta Downs</td>
<td>769</td>
<td>645</td>
<td>-124</td>
<td>-16.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,098</strong></td>
<td><strong>5,779</strong></td>
<td><strong>1,681</strong></td>
<td><strong>41.0%</strong></td>
</tr>
</tbody>
</table>

Source: Louisiana Gaming Control Board compliance reports

With the closest gambling establishments to the Houston metropolis, Lake Charles’ riverboat casinos were an instant success when they opened in the mid-1990s. When **Delta Downs** added slot machines and became a “racino”, it added another 1,057 workers to the area’s gambling industry, a number that has drifted down by almost one half to 645 in 2017-I.

A third key sector is **aircraft repair**. There are now two significant employers located at Chennault Industrial Airpark---**Northrop Grumman** and **Sands Aviation**. Changes in tenants at Chennault have had a major impact on the MSA’s employment pattern over time. Closely allied with the aircraft industry, two significant employers at Lake Charles Regional Airport are **Era Helicopters** with 750 employees and **PHI---another helicopter service firm**. **CB&I Modular Solutions** (formerly Shaw) is estimated to employ about 250 workers whose main focus to date has been manufacturing modular equipment for the nuclear power industry.

**A History of Ups and Downs**

A history of the Lake Charles economy is depicted in Figure 26. This MSA suffered mightily between 1981 and 1986 as the **chemical industry** reeled from a huge loss of sales in its foreign markets. The region lost a whopping 17.9 percent of its non-farm jobs. This loss was caused by a large run up in the exchange value of the dollar. Not only did the industry itself reduce employment by one-third, but capital expansion plans were also halted, hammering the industrial construction sector at the same time.
Coincidentally, the Reagan administration fully deregulated the price of crude oil in the early 1980s. One side effect of this action was that several marginal refineries found it increasingly difficult to remain competitive and shut down. The loss of jobs in the two highest-wage industries in Louisiana’s manufacturing sector, combined with a shuddering halt to industrial construction and other negative multiplier effects, sent the Lake Charles economy into a serious 5-year dive.

Lake Charles was actually the first MSA in Louisiana to begin recovering from the terrible statewide recession of 1982-87. The key was the attraction of Boeing Aircraft to Chennault Field. Boeing created over 2,000 jobs to refurbish K-135 transport airplanes for the Air Force. That helped set Lake Charles off on a recovery mode. The recovery was further aided by a sudden drop in the exchange value of the dollar, which rejuvenated foreign markets for the chemical firms and set them off on a new round of hiring and capital expansions. (Note the magnitude of this recovery is distorted in Figure 26 by the addition of Cameron Parish employment data to this MSA’s job statistics.)

In 1992, Boeing announced the closure of its facility, and the job loss there caused Lake Charles’ employment to slide sideways for two years. The next three years were excellent growth years for Lake Charles. Three factors powered this expansion. First, there were some unusually large capital projects under construction in the petrochemical sector. Citgo and Conoco/Pennzoil combined for $1.6 billion in expansions during this period. (Note that in 1992, $1.6 billion in industrial announcements was considered “ unusually large.”)

Secondly, it was during this period that the riverboat casinos came to Lake Charles. Thirdly, Boeing was replaced at Chennault Airpark by Northrop Grumman—a facility that took 707s, stripped them down, and installed the Joint System Target Attack Radar System (JSTARS) in them. This was an addition of 1,900 good-paying jobs for the Lake Charles economy.

It is obvious from Figure 26 that the good times ended for Lake Charles in 1999. The MSA lost 2,800 jobs in that year and was essentially flat for the next six years. There were several contributors to this poor performance. The first involved hits at the aircraft repair facilities at Chennault Airpark. As Northrop Grumman came near the end of its JSTARS contract, the firm began handling fewer aircraft and consequently began terminating workers. NG reverted to doing maintenance, repair and overhaul (MRO) work on the JSTARS aircraft, and its workforce dropped all the way down to 350. The attraction of EADS to Chennault helped offset NG layoffs somewhat, but even that firm reduced its workforce from about 350 down to 160 before selling to Aeroframe Services.

Secondly, a combination of 9/11 and the national recession reduced trips to the area gambling establishments, prompting layoffs there. Thirdly, Xspedius moved its headquarters office in Lake Charles to St. Louis.
But by far the most important contributor to the downturn was the **funk in the chemical industry**. High natural gas prices forced this vitally important industry in Lake Charles to hunker down and look for ways to reduce costs. One way was to reduce the number of employees. Too, the industry placed capital expansion projects on hold and delayed maintenance/repair work as much as was safely feasible. The result was a significant reduction in **industrial construction employment**.

**The Surprising “Rita Effect”**

What may surprise readers the most about the data in Figure 26 is the growth in 2005 and 2006. Despite being hit by a vicious storm, this MSA’s employment actually **grew**---adding 2,700 jobs over those two years. The larger portion of that growth occurred in 2005, the year of the hurricane.

**Rita's impact on housing:** There were 47,384 homes damaged by Rita in this MSA---but only 2,284 incurred severe damage and 6,673 major damage. Residents could and did return to the Lake Charles area fairly quickly. Normally one would be aghast at these figures, but against the backdrop of the housing destruction in New Orleans, they pale. It is very important to note that with the exception of lower Cameron Parish (the most sparsely populated parish in the state) **there was virtually no flood water damage** in Lake Charles. That means regular
homeowner’s insurance was applicable to the damage. As a result, all the impediments to rebuilding that existed in New Orleans due to standing flood waters did not exist in Lake Charles.

**Rita’s impact on Lake Charles manufacturing:** It is the nature of the manufacturing industries in Lake Charles that they would seemingly be very vulnerable to a powerful storm like Rita. Chemical plants and refineries are very capital-intensive, and all their capital is outside and exposed to the elements. In fact, three refineries in the area were damaged and shut down: (1) Citgo (324,000 b/d); ConocoPhillips (239,400 b/d), and (3) Calcasieu (30,000 b/d). All three were back up by December 2005.

Also, the aircraft industry, which operates in large hangers, seemed likely victims of high winds. Despite these vulnerabilities, these industries made it through the storm without losing much downtime. There was $40 million in damage to hangers at Chennault, but the two firms operating there continued to do so despite the inconvenience. Importantly, **staffing** was not as difficult a problem as in New Orleans because most housing remained intact in Lake Charles.

**Rita’s impact on the Lake Charles gaming sector:** As a result of Rita the two Isle of Capri-owned casinos and the L’Auberge du Lac encountered minor damage and were reopened by November 2005. However, the two Harrah’s riverboats were badly damaged by the hurricane. Again, Pinnacle Entertainment, which owns L’Auberge du Lac, purchased both of Harrah’s licenses in Lake Charles. Pinnacle returned one license to the Gaming Control Commission and moved the other license to Baton Rouge.

**Rita’s impact on other sectors:** A look at other sectors in Lake Charles indicates a solid recovery in the aftermath of the storm. By January 2005, all **hospitals** in the MSA except one in Cameron Parish were fully operational. The **Lake Charles Regional Airport** began operating at an even higher level than pre-Rita. By contrast, it was 2014 before the New Orleans airport was operating pre-Katrina levels.

Within a month of Rita’s landfall, 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. The **Port of Lake Charles** escaped any flooding by Rita. However, it did experience about $40 million in wind damage and initially had no power. Within a few days power was restored and the port was open to receive shallow water vessels.

Careful reviewers may have noticed another important fact back in Figure 26. In 2007 Lake Charles MSA set a **new record in employment**—exceeding the previous peak by 2,100 jobs. Construction associated with the storm recovery was still robust in 2007, about 2,200 jobs higher than just after Rita. However, construction’s growth peaked in 2007 and was slightly lower in 2008, constituting something of a temporary drag on the area economy.

**The Great Recession Felt Hardest Here**

Among Louisiana's eight MSAs, none suffered more than the Lake Charles MSA from the Great Recession. Although this MSA's employment began to slide later than the national economy---in February 2009 as compared to January 2008---2009 was particularly harsh on the
region. In that year the MSA shed 3,900 jobs and then it lost another 2,200 in 2010---an employment drop over two years of 6.5%. This is a worse decline than that experienced at the national level (6.1%).

What was behind this poor performance over 2009-10? There were several factors, including:

- **In 2008 Citgo** announced it was closing its 192-person lube plant which added to the drag of reduced construction spending.

- **Aeroframe**, which does maintenance work for FedEx and US Airways aircraft had to reduce its workforce from 475 to 250 as both firms idled many of their jets due to the sagging global economy.

- The weak national economy hurt business at the area's important casino industry.

- The region was delivered a blow in the Summer of 2010 when Pinnacle announced it was stopping construction on the Sugarcane Bay Casino and was turning in that license to the Gaming Control Board. It should be noted that the combination of the Great Recession and the unusually weak recovery negatively impacted the casino market.

- During this period the region's petrochemical firms really tightened their belts especially with regard to capital projects. This is illustrated below in Table 9 which contains data supplied by the Lake Area Industry Alliance which shows an almost **3,000-job decline in contractor jobs** at area plants over 2007-10. Fortunately, the data for 2011-12 show this downward trend was reversed, and in the case of contract workers has almost increased over 50% from the 2010 trough.

### Table 9

**Employment in Lake Charles Area Petrochemical Plants**

<table>
<thead>
<tr>
<th>Year</th>
<th>Full Time Employees</th>
<th>Contract Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>6,401</td>
<td>3,003</td>
</tr>
<tr>
<td>2006</td>
<td>6,158</td>
<td>2,830</td>
</tr>
<tr>
<td>2007</td>
<td>6,221</td>
<td>5,412</td>
</tr>
<tr>
<td>2008</td>
<td>6,070</td>
<td>3,572</td>
</tr>
<tr>
<td>2009</td>
<td>6,042</td>
<td>3,070</td>
</tr>
<tr>
<td>2010</td>
<td>5,961</td>
<td>2,456</td>
</tr>
<tr>
<td>2011</td>
<td>6,683</td>
<td>3,265</td>
</tr>
<tr>
<td>2012</td>
<td>6,754</td>
<td>4,273</td>
</tr>
<tr>
<td>2013</td>
<td>6,083</td>
<td>3,611</td>
</tr>
<tr>
<td>2014</td>
<td>6,180</td>
<td>3,656</td>
</tr>
<tr>
<td>2015</td>
<td>6,420</td>
<td>4,021</td>
</tr>
<tr>
<td>2016</td>
<td>6,507</td>
<td>NA</td>
</tr>
<tr>
<td>2017</td>
<td>7,126</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Lake Area Industry Alliance
Finally: A Growth Year in 2012

Referring back to Figure 26, readers will notice the beginnings of a recovery in 2011 (+600 jobs) and very good growth over 2012-13. In 2012 and 2013, the region’s employment rose by 2% and 2.6%, respectively. What is particularly impressive about this performance is it was accomplished despite the fact that a major employer---Dynamic Industries---basically shut down its 500-person operation in Lake Charles in 2013. The firm won phase I work on manufacturing components for the Marine Well Container project. However, the company was unsuccessful in landing phase II, so terminated its operations in this region.

On a far more positive note, during this period Shaw Modular Solutions opened its new facility and now has an estimated 250 employees. Aeroframe added employees as one of its key customers---FedEx---began to fly more planes. Importantly, turnover work at area petrochemical firms rose from $350 million in 2010 to over $800 million in 2012, and area chemical firms in general were enjoying an increase in business due to increased exports. Note back in Table 9 that LAIA surveys indicate direct employment in petrochemical firms jumped by 793 employees over 2011-12 and contract employment rose a whopping 1,817 jobs over that same time period.

Ground-breaking took place on the $500 million Golden Nugget Casino in July of 2012. Work began on a $176 million expansion at Sasol and at the Lake Charles Port, IFG started construction on phase I of a new $59.5 million grain elevator. Even more importantly, $5.6 billion worth of work began on the first two “trains” at Cheniere’s new LNG export terminal. We will have more to say about this project below.

2014-17: The Real Boom Begins

As Lake Charles entered 2014, we began to see the first evidence of a massive boom in this corner of the state unlike any ever seen before. Note how the employment line in Figure 26 moves up markedly in 2014-2017. Specifically:

- In 2014 employment in the Lake Charles MSA set a regional record for the first time since 2008.
- In 2015, employment passed the 100,000 mark for the first time in the MSA’s history and it passed Houma to become the fourth largest MSA in the state.
- Lake Charles has now been the fastest growing MSA in the state for four straight years, adding 20,500 jobs and expanding by a remarkable 5.1% a year. In 40 years of monitoring the Louisiana economy we have never seen back-to-back job performances like that in any MSA in the state.

Performance of the Lake Charles economy over the past four years reminds the author of that great race in the 1973 Belmont Stakes won by Secretariat by 31 lengths. Like Secretariat,
Lake Charles is far out in front of all the other MSAs in the state and is one of—if not the—fastest growing MSAs in the nation.

What was the source of this remarkable performance? Readers are referred back to Table 2 in the section of the LEO where the huge industrial boom in the state was documented. Lake Charles has garnered an astounding $126 billion in industrial announcements since 2012. Remember our earlier reference to $1.6 billion in announcements in 1992 as “unusually large”? Today’s figure is 80 times larger!

Of these $126 billion in announcements, $55.9 billion (44%) are already constructed or are underway. This massive injection of money into this economy has shot its employment straight up. Among these projects are:

- **Cheniere Energy** is constructing a $20 billion, 6-train LNG export plant called Sabine Pass LNG. This is the largest single capital investment project in Louisiana’s history. Three of the trains are operational and Cheniere made 140 shipments from the site as of August 2017. The fourth train should be operational this fall, followed by the fifth train in 2019. No timeline has been set on the 6th train. Once complete, 148 people will be employed at this facility earning an average of $100,000 a year.

- Also coming in at a whopping $20 billion capex is **Sempra**’s Cameron LNG project. Construction was started in August 2014 with a goal of initial operation in 2018 and full completion in 2019. Expected employment is 190 jobs at $80,000 a year.

- Ground was broken in March 2015 on **Sasol**’s $11 billion ethane cracker and derivatives complex. Projections are to open this plant in 2018 with 500 Sasol jobs (at $88,000 yearly) and 358 contractor jobs.

- In Mid-2016, a joint venture between **Axiall and Lotte** Chemical began construction of a $3 billion suite of facilities that will be a world-scale ethane cracker and ethylene derivatives plants. Lotte is also moving its headquarters from Houston to Lake Charles. Expected to start up in 2019, this new complex will employ 215 workers at $76,000-$86,000 a year.

- Electric power company **Entergy** has two large projects for this area. One—a $187 million transmission project—was started in 2016 and will be completed in 2018. In June 2017, the company received approval to spend $872 million on a new power plant and transmission interconnections in Westlake. Construction on this facility will not actually begin until 2018 and it will become operational in 2020.

- **G2X Energy** brought ground on its Big Lake Fuels project in January 2016, which is the first phase of a two-phase project. Big Lake is designed to convert natural gas to methanol and from methanol into auto gasoline. Construction of this unit has been put on hold as the company moved its focus to a similar plant in Beaumont. Once the Beaumont project is completed G2X is expected to re-start construction on Big Lake. The company plans to spend $1.6 billion on both phases.
- **Westlake Chemicals** started construction in 2016-II on a $350 million ethylene expansion at its Petro I plant.

- **York Capital GTL** (formerly Juniper GTL) should complete construction this year on a $100 million renovation of a dormant steam methane reformer in Westlake. The facility will make diesels, waxes, and naphtha.

- A state-of-the-art air separation unit to supply gas to Sasol has been completed by **Matheson Tri-Gas**. This $130 million project will add 27 jobs to Matheson’s 13-job workforce.

- **Indorama Ventures** is undertaking a $175 million renovation of a dormant ethane cracker at the old OxyChem site. This facility should open at the end of 2017 and create 100 jobs at $50,000 a year.

- On a smaller scale than the others, **Dongsung Finetee** is spending $5 million at the Port of Lake Charles on a new cryogenic insulation manufacturing plant. Scheduled to open at the end of 2017, the new plant will create 250 jobs at $40,000 a year.

How will this racehorse of an MSA perform in 2018-19? Is another 31 length win in store? Or are these the years when things return to normal? That is the question addressed next.

**Forecast for 2018-19: The Much Anticipated Pullback**

Recently a reporter asked the author how much longer this growth spurt can continue in Lake Charles. After all, ultimately these projects get completed and hundreds of pickups full of construction workers leave the sites never to return. Indeed, a quick review of the projects listed above reveals that many will be completed in 2018. No one really believes a 5.1% employment growth rate is sustainable given its source.

It appears that 2018 will be a year in which Lake Charles begins to feel a pullback from the completion of these projects. Our first hint was from noticing the timeline on the projects in construction now in the MSA. In particular, the two LNG export terminals are entering their last phases of construction, and these periods are typically less construction-intensive than the middle phases.

More importantly, the **Southwest Louisiana Construction Users Council** (SLCUC) has recently surveyed its members about their construction worker needs over August 2017 to January 2019. The results are shown in Figure 27. Construction demand is projected to decline from around 14,500 to 9,500—**a 5,000 worker drop**. It is important to note that the SLCUC membership does not include the Cheniere, Indorama Ventures, York Capital or Axiall-Lotte projects. Our conversations with executives of major construction firms confirm that such a decline is built into their planning.
Figure 27

It appears that 2018 is the year when Lake Charles will begin to feel the drop from reduced construction spending in the MSA. As seen in Figure 28, employment is projected to rise 1,800 (+1.3%) in 2018 and 4,000 (+3.5%) in 2019. Even with the construction slowdown built in, Lake Charles is expected to be the fastest growing region in the state.
Unlike Baton Rouge, which is finishing up its projects and has nothing on the other side, Lake Charles still has a very envious future ahead. $70.1 billion in projects that been announced for the region still have not broken ground. They are also not included in the construction needs survey in Figure 27 above. Among these projects are:

- **Driftwood LNG**, under the direction of the former CEO of Cheniere, is hoping to start a $14.5 billion LNG export facility on 800 acres on the west side of the Calcasieu River. Construction start is set for late 2018 and completion of all trains in 2025. There are 498 permanent jobs associated with this venture.

- The proposed **G2 LNG** facility on the Calcasieu Ship Channel is going through the FERC approval process at this writing. This $11 billion project would start construction in 2018 and finish in 2021 with 250 permanent jobs at $85,000 a year when operational.

- **Lake Charles Methanol** is a $3.8 billion project that will use carbon capture technology to take carbon captured from enhanced oil recovery and convert it to natural gas. Two
hundred new permanent jobs will be created with this project. It requires a $2 billion loan guarantee for the Department of Energy, a guarantee which is in jeopardy in President Trump’s latest budget.

- **Lake Charles LNG** (formerly Trunkline) made an advanced filing with the state for an $11 billion LNG export terminal. One of the key players in the project—Shell—hard tabled the project last July. The company has signed a memorandum of understanding (MOU) with Energy Transfer Partners to examine forming a joint venture to build this project. An FID is expected at the end of 2018.

- **Monkey Island LNG** (formerly Southern California Telephone and Energy) has signed 99-year lease on 232 acres on Monkey Island to build a $6.5 billion, 6-train LNG export terminal. The firm has MOUs in place for both a supply of gas and a user (the JOVO Group from China). The firm expects to be operational by 2023.

- Another $4.25 billion LNG export terminal is planned on 938 acres at the mouth of the Calcasieu Ship Channel. **Venture Global** has an engineering-procurement-construct (epc) in place and buyers for part of its output. Approvals are still needed from FERC and DOE.

- **Magnolia LNG** is planning a $4.35 billion export facility at the Port of Lake Charles. An epc has been signed with SK E&C USA, and FERC approval has been received, so the firm is pushing for more commercial sales before issuing an FID.

- **Commonwealth LNG** (formerly Waller LNG) is awaiting approval from DOE and FERC for its $200 million facility.

- While it is still on our open list our confidence is dropping that **Sasol** will move forward with its $12 billion GTL project. A positive decision was dependent on price control on its ethane cracker, which initially was priced at $9 billion and is now at $11 billion. Also, oil prices would need to be significantly higher to make a natural gas-to-gasoline project make sense.

- **Advanced Refining Technologies**---a joint venture between WR Grace and Chevron---involves a $135 million residue hydro-processing catalyst production plant and additional aluminum capacity at the Grace plant. This project is presently on hold due to market conditions but is expected to be built.

- A major project under design and discussion is **Port Cameron**, a $1.5 billion, 50-acre port at the mouth of the Calcasieu Ship Channel. Designed to provide port services to facilities operating in the Gulf, officers are putting together financing. The Group has signed a lease for 1.2 million square feet of space with Peterson Offshore Group, an European energy logistics management operator. A stronger recovery in the Gulf would go a long ways toward achieving an FID for this project.
• **Delfin LNG** is an oddity among the proposed LNG export terminals. Delfin would have all operations on an FLNG---floating LNG facility located 45 miles off the coastline of Cameron Parish. This $7 billion project would likely be built outside of Louisiana, but the state economy would gain from the operation of the plant. Delfin has purchased UTOS pipeline, the largest natural gas pipeline in the Gulf and expects a FID in 2018 and to be operational in 2022.

Readers will have noticed a common phase that recurred over and over again in this list---LNG export terminal. Nine potential projects are listed above. Back on pages 15-17 the LNG export market was described for the reader. If that analysis is correct, two conclusions can be made about the nine projects proposed for this MSA. First, any project that makes a FID will likely not **start until late 2018 or into 2019** so their project will become operational in about 2022 when the market moves back into a shortage situation. Secondly, it seems **highly unlikely that all nine will pull the trigger** and start to build. That would probably flood the market with too much LNG. Still, if only one or two of these projects begin construction, we are talking about multi-billions of dollars of new construction---enough to re-energize the Lake Charles economy in 2019.

**A Spark from Chennault**

Chennault Industrial Airpark continues to be a significant player in the Lake Charles economy. **Northrop Gruman** continues to provide MRO (maintenance, repair, and overhaul) services on the Joint STARS, UK AWACS, and other international 707 platform operators. With 950 employees, this is Northrup Grumman’s Center for Excellence for Technical Services and Repair Operations Division. NG is bidding on multiple new projects, so the hope is for an employment increase in 2019.

With AAR moving out in August, **Sands Aviation Group** is coming to Chennault in October with 400 new employees. The firm does MRO work on its own planes and for high-end customers and will operate in hangars H and D and use space in the administration building. Also on the campus now is **Land Lock Aviation**, an aircraft painting company that is also competent to do small-scale aircraft modifications. Land lock has 47 employees and is expected to grow.

**WE** indicated in last year’s LEO that Chennault has signed a professional services agreement with CSRS of Baton Rouge to determine interest in a $237 million expansion onto 220 acres now occupied by the **Mallard Golf Course**. It is the area just below Site 8 on Map 3. Chennault would provide the property and client would build on it in a public-private partnership, with Chennault getting the land back in 30 years. CSRS would put together RFPs from clients such as air cargo companies, refrigerated warehouses, private hanger etc.
Other Public Construction

A slight kick upward will be given to this region’s economy by state road lettings, which will rise from $157.2 million last year to $278.9 million for 2018-19. Two of the larger projects will be $59.6 million to rehabilitate the Prien Lake Bridge and $30.3 million on new LA12 bridges.

The Port of Lake Charles has $120 million in capital projects over 2017-18 and another $27 million planned for 2019. About $31 million a year will be spent on dredging over our forecast period.
Monroe: Poised for a New Employment Record

Located in the northeast corner of the state (see Map 1), the Monroe MSA is comprised of two parishes---Ouachita and Union. Monroe is the third smallest MSA in the state (ahead of Alexandria and Hammond), with an estimated 79,900 non-farm jobs in 2017.

Until the turn of the century, this MSA had the highest concentration of employment in the broad category called “finance/insurance/real estate” (FIRE) of any MSA in the state. Partly that was because of the 1,800-person JPMorgan Chase Mortgage facility, the service part (400 employees) of which was spun off to Wing Span Portfolio, a company that subsequently folded. Another big contributor to this ranking was the 1,200-person State Farm claims center. The latter closed its doors in 2005, and Chase absorbed the Bank One documents depository, so FIRE’s influence in this MSA’s economy has been reduced somewhat.

Other large employers in the region include Graphic Packaging, a paper/carton plant that employs about 1,340 people at its three sites. CenturyLink---one of Louisiana’s Fortune 500 Companies---also plays a key role in this MSA’s economy with its workforce now approaching 2,300. Delphi Lighting was a major player until it closed its 800-person headlight manufacturing facility in June 2007. Vantage Health Plan is a newer addition to the region and has grown to employ 1,280 people. The University of Louisiana Monroe is also located in this MSA and has about 300 faculty members.

Monroe Employment History

Figure 29 traces Monroe’s employment history from 1980 to 2017. Like Baton Rouge this MSA was only lightly tapped by the deep recession of 1982-87. Monroe only lost jobs for two years---1986 and 1987---and even then the decline was only 2 percent as compared to the 9 percent statewide job loss. The reason for the light hit is that Monroe has almost no jobs in extraction or chemicals, which were the two industries that suffered the most during that recession.

By 1989, Monroe had retrieved all those lost jobs and was setting new employment records. Between 1987 and 2002, this region enjoyed a 14-year stretch of growth, with five of those years registering 2.5 percent plus annual growth rates. (The increase in 1990 is distorted by the addition of Union Parish to the MSA’s numbers.)

The years from 2003 through 2011 were not good ones for the Monroe MSA as evident in Figure 29. Remarkably, Monroe did not have a growth year during this entire 9-year period. The decline was not horrendous, but it was steady. After going flat in 2003, the MSA lost 4,300 jobs over 2003-11, a 5.4 % decline. (The three years from 2005-07 were flat.) During the "Great Recession" the region lost 2,300 jobs, a decline of 3.0 percent---tied with Lafayette as the third best performance in the state.
Consider the body blows this region took during those nine years:

- The biggest hits came with the initial layoffs at, and then total closure of, the State Farm Insurance claim office, costing the area 1,100+ jobs.

- Guide Corporation reduced the workforce at its headlight plant, and then totally shuttered the facility in 2007, at a cost of 650 jobs with an annual payroll of $53 million.

- Graphic Packaging also engaged in workforce reductions.

- Holsum Bakery closed its facility in Monroe, terminating 50 employees in the process.


- In 2009, Shaw closed a pipe fabrication plant that had 202 employees and an $11 million annual payroll.

- In 2008, Pilgrim’s Pride closed a chicken processing plant in Union Parish that cost the region an estimated 1,500 jobs.
• In early 2010, Accent Marketing lost a major client and dismissed 340 workers at its call center.

• Coca Cola closed its bottling plant, dropping 85 people.

That is a remarkable list of 9 significant closures during those nine years. It is a wonder that the job loss was not much greater.

2012: An End to the Blood-Letting

As seen back in Figure 29, Monroe actually experienced net job growth in 2012 for the first time in nine years, and it was a healthy boost of 1,000 jobs. There were no more major layoff announcements in that year, and the region received a shot in the arm from a number of sources.

• CenturyLink continued to move like a freight train in its acquisition efforts. In 2014, the company made a commitment to keep its headquarters in Monroe through 2020 and added to its Monroe workforce.

• Foster Farms reopened the shuttered Pilgrim’s Pride plant and is now back up to 1,200 employees in Union Parish.

• Gardner Denver Thomas relocated operations in Wisconsin to the Monroe area in 2010, generating 67 jobs initially and now employs 300.

• As a sign of a longer run commitment to the region, Graphic Packaging brought in new equipment from a mill in Colorado to increase productivity of its workforce, which it plans to keep stable for now.

• Angus Chemical invested about $100 million in its plant in Sterlington, including a $10.8 million investment in 2011 in a new electrical substation and general electrical system, which helped the firm remain productive enough to retain its 174 jobs.

Fortunately, that growth pattern in 2012 continued through 2014. The MSA averaged 800 new jobs a year over 2012-14.

2015-17: Adding 600 Jobs a Year

Despite the loss of 400 jobs at Wingspan Portfolio Advisors, the Monroe MSA has steadily added 600 jobs a year for the past three years. Continued growth at CenturyLink, the entrance of IBM to the market, and the steady growth at Vantage Health Plan have kept Monroe on a steady, if not spectacular growth path. We estimate that by the end on this year, this MSA will be only 300 jobs shy of recovering all the jobs lost during the disastrous nine years between 2002 and 2011.
Forecast for 2018-19: Setting a New Record

It is hard to believe that Monroe’s previous employment record was back in 2002, but that speaks to the numbers of body blows that MSA has received in the past decade and a half. The good news is the region is poised to finally start setting new employment records in 2018, with growth continuing into 2019. Our forecasts are for the Monroe MSA to add 800 jobs a year over 2018-19, a 1% a year growth rate (see Figure 30). Sometime in the latter part of 2017 or early 2018, Monroe should push through its old employment record set 1 ½ decades ago.

Fig. 30: Monroe MSA Wage & Salary Employment
Forecast: 2018-19

All Eyes on CenturyLink

The very heartbeat of this region’s economy for some time has been CenturyLink, one of Louisiana’s two Fortune 500 companies. Now at 2,300 employees, the company plans to add about 400 new jobs a year over 2018-19 at its new 88-acre Century Village campus.

Natives of the area watched nervously as CenturyLink acquired Level 3---a company located in Broomfield, Colorado---which is the larger of the two companies. CEO Glen Post,
who was the driving force behind the creation and success of CenturyLink, will stay in his role until January 2019. Post will then move to Executive Chairman of the Board. Jeff Storey, from Level 3 is moving from Denver to Monroe and assuming the role of COO at CenturyLink until Post moves up to Executive Chairman of the Board in January 2019. Then Storey will take over the CEO position.

Publicly, CenturyLink has reaffirmed its commitment to keeping it headquarters and operations located in Monroe. On the streets of the city, citizens have watched the new acquisition with trepidation, concerned that the company will ultimately be moved to Colorado. For the next couple of years, all eyes will be on CenturyLink.

More Good News: IBM and Vantage

New jobs at CenturyLink will be matched by nice job gains at two other significant companies in the MSA. Vantage Health Plan finished its $24 million specialty office building and a $20 million renovation of a state office building in downtown Monroe in 2016. Now at about 1,400 employees, Vantage is expected to add 170 more jobs in 2018.

IBM is moving from the Tower Place in downtown Monroe to a $12 million applications and development center across from CenturyLink. This building should be ready for occupation in 2017-IV. At 250 employees, IBM is expected to be up to 400 jobs by the end of our forecast period. Louisiana Tech, Grambling, and ULM have been given $4.5 million to upgrade their computer programs to feed workers into IBM.

Another major employer in the MSA is the Chase Mortgage Processing Center. Now at just over 1,800 employees, this center’s employment is projected to be stable over 2018-19.

Positive News from Manufacturing

Three key manufacturers in the MSA have signaled their commitment to the region in this past year. Graphics Packaging, with 800 employees, has announced a $274 million capital expenditure to (1) upgrade to its paper mill and (2) construct a new folding carton plant and logistics center. This project should be completed in 2018 and result in 93 new jobs.

Angus Chemical, with locations all over the globe, was bought by an investment group --Golden Gate Capital---in 2014. Plans are to invest another $100 million in the Sterlington site over the next few years. Another global company, Gardner Denver, consolidated a California plant at its present location in early 2017 and plans to add 20-25 jobs at its plant.

A Ding from the State Road Lettings

While most of the news above is uniformly positive for Monroe, the region will be dealt a minor setback from a reduction in state road lettings over 2018-19. In last year’s LEO, the lettings figure for this region was $86.9 million. For 2018-19 that figure has fallen by 30% to $60.5 million. Two of the larger projects listed in this MSA’s lettings are (1) $24 million on a
Kansas Lane/Garrett Road connector and (2) $9.6 million to replace the bridge at Cheniere Spillway.

**Alexandria: Rebound Led by Cleco & UTC**

Alexandria is the second smallest of Louisiana’s nine MSAs with about 63,100 non-farm employees in 2017. This MSA is comprised of two parishes---Rapides and Grant. Alexandria derives the lowest percentage of its employment from the “basic” sectors---mining and manufacturing---of all the MSAs in the state except Hammond. Located in the central part of Louisiana (see Map 1), it has typically served as the retail/services center for the north-central part of the state.

Alexandria also has the second highest percentage of employment in the **government sector** (20%) of all the MSAs as well---even larger than Baton Rouge (17.1%), which is the state capital and home to two large state universities. Among the significant state agencies in the area was the **Huey P. Long Medical Center**, the 400-person charity hospital for this region, which was taken over by two of the private hospitals in the region. **Pinecrest Support and Services Center** provides care for the mentally disabled and employs about 1,300 people. **Central State Hospital** for the mentally ill has about 300 workers at the present time. Nearby **Fort Polk** is the largest military installation in the state. While not actually located in the Alexandria MSA, this huge base has a noticeable impact on this MSA’s economy.

**Procter & Gamble** has a significant 1,200-person operation in this MSA, and **Union Tank Car** with just over 250 employees is located at England Airpark. The utility company **Cleco**, with 1,200 employees, is also a major force in this MSA’s economy, and **Roy O. Martin** employs about 1,200 at various wood processing sites in the region. **Crest Industries**---which is the umbrella firm for DisTran, CNR, Beta Engineering and Mid State Supply---makes steel poles and substations for electric power generation and employs about 650.

**Alexandria’s Recent Employment History**

Alexandria’s employment history is illustrated in Figure 31. Five key points will be noticed by the careful reader when viewing this figure. First, note that there was a slight bump upwards in 1990. The Department of Labor revised the employment statistics only back to that year to take into account the addition of Grant Parish to this MSA.

Secondly, note that this MSA enjoyed an **almost recession-free history** until 2001. Except for a mild decline in 1982, its employment track had basically been a line moving constantly upward for the last two decades of the 20th century.

Even the post-9/11 national recession in 2001 only mildly impacted the Alexandria MSA, causing a meager loss of only 200 jobs (-0.3 percent). This means the Alexandria MSA was the
second-least impacted of all the state’s nine MSAs—-not a surprising finding given the lower manufacturing base and the government-orientation of the region. (Hammond was the least impacted.)

**Fig. 31: Alexandria MSA Non-Farm Employment 1980-2017**

![Graph showing Alexandria MSA Non-Farm Employment 1980-2017](image)

Note thirdly that there is a **slight kink upward in the graph starting in 1992**. Two factors contributed to this nice boost in Alexandria’s growth rate. The first was a seemingly negative event—the closure of England Air Force Base. Civic and governmental leaders turned this economic lemon into lemonade by gaining control of the base assets and turning it 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.

Too, during this period **I-49 was being constructed** through the heart of the city, adding an unusual injection of construction jobs to the economy. There was a slight slowdown in 1996-
97 when one of England’s newest and largest tenants---J.B. Hunt Trucking---shut down their operation there.

**2005-08: Great Growth Years**

A fourth lesson in Figure 31 is that the recovery from the 2001 recession was initially lackluster at best. Employment was basically flat from 2002 through 2004. However, as seen in Figure 31 the next four years were very good ones for this MSA. Employment jumped by 6,100 or a strong 2.5 percent annually. This was one of the best performances in the state over that 4-year time frame.

During this rapid expansion phase there was (1) a doubling of the size of the federal prison at Pollock, (2) significant capital expenditures at England Airpark, (3) $132 million on the construction phase of Union Tank Car (UTC), (4) UTC began a hiring process that resulted in 670 workers initially at its new plant, (5) the huge $1 billion+ Cleco Rodemacher plant was under construction at the time, creating about 1,700 construction jobs, and (6) a new $60 million MARTCO plant was constructed in the southern part of the MSA.

On the outer edges of the MSA, there was a $100 million addition to the Paragon Casino in nearby Avoyelles Parish, and a large amount of construction spending took place at Fort Polk. While these two projects are outside of the MSA’s borders, they created extra earnings which were often spent in Alexandria’s retail and service establishments. Offsetting all this good news was the closure of Parta Systems, a 110-person pharmaceutical parts manufacturing plant.

**2009-13: A Pounding from the Great Recession & State Government**

The fifth lesson from Figure 31 is the almost continuous drop in employment over the four years from 2009-13. During that period, this MSA lost 4,200 jobs---a 6.3% decline.

**Great Recession Effects:** The Great Recession was partly the culprit. Alexandria’s employment took quite a hit over 2009-10, losing 3,600 jobs or a 5.4 percent decline. Only Lake Charles at -6.3% had a worse record during the Great Recession.

There were several factors behind this drop. The attraction of a large, high-paying, durable goods manufacturer like Union Tank Car is great for an area. However, when the national economy goes south, durable goods manufacturers get hit the hardest. After reaching a peak employment of 670 in early 2008, orders for UTC tank cars dropped so much that the firm reduced its employment to 270. Eight to nine companies that lease cars from UTC went bankrupt and returned their cars. Plus, demand for new railcars was down as always happens when you have a recession as bad as the Great Recession. For example, in 2006 about 60,000 rail cars were sitting idle; by spring 2009 this number was up to 540,000.

Secondly, the region’s lumber industry came under attack due to the weak national housing market. Specifically, Louisiana Hardwood in Lemoyen halted its second shift in 2009, and International Paper closed its container board plant in late 2009, terminating 230 people. Thirdly, the huge $1 billion+ Cleco Rodemacher plant construction project was finished in
2009, resulting in the loss of those 1,700 construction jobs. On a lesser scale, Dresser Industries began moving from a manufacturing orientation towards assembly, and reduced its workforce by 75 in early 2010. Finally, Star-Tech lost a major customer and laid off 300 people.

2010-17: Languishing

Alexandria did not pop back from the Great Recession as is clear from an examination of Figure 31. Since 2010, the region’s economy has been either flat or—in the past two years—declining. This occurred despite the fact that the Jena Indian Tribe opened a 46,000 square foot, class II casino in February 2014 that employs 300 people.

A key culprit was this languishing performance. We mentioned in the introduction to this MSA that this region has a higher percentage of employment in the government sector than any other MSA in the state. More often than not that lends an extra measure of stability to a region, but not when state and local governments are having budgetary problems. Since 2010, state government employment in the MSA has steadily declined by a total of 1,200 jobs and local government has declined by 600 jobs. That is large enough alone to put a serious drag on the MSA’s economy.

State government was not the only problem. The decline in in the last two years was prodded along by private sector players as well. Union Tank Car announced a workforce reduction of 244 because a primary customer left its fleet. GE-Dresser finally closed its facility in the area, costing the MSA 289 jobs. The result of these hits is Alexandria’s employment by the end of 2017 will be 4,300 jobs below the peak last achieved in 2008.

Forecast for 2018-19: Cleco, UTC & Dis-Tran to the Rescue

Fortunately, it looks like the stars are arranged for this MSA to enter a recovery phase. As seen in Figure 32, we are projecting 300 new jobs a year for the Alexandria MSA over 2018-19, about a 1% improvement in its job count.

Three key firms in the MSA will lead this charge. The 1,200-person utility company Cleco is beginning its $130 million “Start” technology project over the next two years. One hundred IT consultants will be coming to Alexandria to work on the project, and Cleco is relocating 60 employees to a formerly unoccupied building in Alexandria to work on it as well. It is very likely some of these 60 employees will be back-filled with new employees to do their jobs during this work. IBM will be the system integrator and will be adding 23 jobs at its Baton Rouge site to support project “Start”. Restaurants and hotels in the area will enjoy a nice shot in the arm from all these high-paid workers coming to the area.

Chemical growth along the Gulf corridor has generated an increased demand for railcars—a boon to Union Tank Car. UTC made 1,575 cars in 2017 and is projecting 1,977 in 2018. The firm will by expanding from 260 to 340 workers in 2018, with additional hires expected in 2019.
Crest Companies continues its steady employment arc upwards. Presently at 650 employees, this umbrella company for Dis-Tran, CNR, Beta Engineering, and Mid-State Supply will see employment gains in several of its units. Beta Engineering should be adding 40 more employees, and Dis-Tran Packaged Substations at the Port of Alexandria will hire 25 more workers for its skid-mounted mobile substation plant. Dis-Tran Overhead Solutions, which manufactures fiberglass cross arms for the utility industry, will be employing 10-12 more, while Dis-Tran Steel’s employment will remain stable over 2018-19.

Economic developers in this region were encouraged by the announcement in 2017 that Plastipak Packaging would be spending $15 million to add seven production lines at its plant. Another 10 people will be hired to man this new addition. One of the region’s largest employers---Proctor & Gamble---with 500 P&G employees and 700 contractors should remain stable over 2018-19.

Expect More Shrinkage in Public Sector

Given the private sector positives described in the previous section the obvious question is why only 300 new jobs a year are projected for this MSA. The answer lies in employment difficulties in the public sector. This MSA has the second highest concentration of government
employment in the state, and it is unlikely the $1.5 billion “fiscal cliff” the Governor and Legislature are facing will be settled totally by raising more revenue. More cuts for state institutions seems inevitable, so the downward trend in state government employment will not likely be arrested.

Data on state road lettings in the MSA are also not encouraging. Last year the value of these lettings was $64.8 million. The figure for 2018-19 is $48 million---26% lower. The two biggest projects are (1) $14.3 million on a bridge on US71 near Tioga and (2) $4.5 million on street rehab work in Alexandria.

Capital expenditures will also be down at England Airpark. $55.8 million is planned over 2018-19. Work will be done on rebuilding infrastructure such as runways, ramps, and electricity (including replacing all lighting with LED lighting) on the airfield side. On the land side a rental car maintenance facility in underway and a road project is planned. A bill for $10.8 million to install utilities at the Airpark’s 1,600-acre mega-site went all the way to the Governor’s desk before being vetoed.

Bad News about Future Mega Projects

It was discouraging to learn that the plug has been pulled on two large new mega projects planned for this region. Sundrop, which had been working on a pilot project at Cowboy Town, has now decided to abandon this project. A similar decision was made about the Investimus Foris bio-fuels project scheduled for construction in Pollock.

On a more positive note, the Cool Planet Energy facility at the Port of Alexandria is still alive. Originally, the plan was to use forest waste (1) to make fuel and (2) to manufacture a biochar to help farm land retain water and strengthen plant roots. The latter product is called Cool Terra and is the focus of the firm’s efforts now. Cool Planet has spent about $8 million on the site at the port and has raised about $30 million for the project. Once sufficient market demand has been established for Cool Terra, the firm plans to start building its plant in earnest. The target date for construction is 2017-H2.

In terms of economic development in this region, we should not forget that a condition of the purchase of Cleco, by an investor group led by Macquarie, was a check for $7 million to the state to use for economic development in Cleco’s service areas. A “kitty” that was not there before is now available to help this region land projects in the future.

Hammond: Look to SLU & North Oaks

The Hammond MSA is the newest member of the MSA club in Louisiana and is composed of one parish---Tangipahoa. This MSA is located from the northwestern edge of Lake Ponchartrain north to the Mississippi line and between Baton Rouge on the west and Slidell on the east (see Map 1). This parish is perhaps best known as the “Strawberry Capital of the World” and is host to a famous strawberry festival each year. In 2017, an estimated 45,500 people were employed in this MSA, making it the smallest of the nine in Louisiana.
The two largest employers in the parish (aside from the School Board) are North Oaks Medical Center (2,600 employees) and Southeastern Louisiana University (1,368 employees). The dominance of these two players means healthcare and educational services play a larger role in this economy than in the state as a whole. Healthcare represents 20% of employment in this MSA versus 13.7% at the state level, and educational service is 12% versus 2.3% at the state level. This MSA has the highest percentage of government employment (24%) of any MSA in the state.

Manufacturing is not as large an element in this MSA (5.3% of employment) as is the case at the state level (6.9%), and manufacturing has a larger food processing component than the other MSAs, headed up by the 550-person Sanderson Farms poultry processing plant and the 164-person (and growing) Elmer’s Candy plant.

There are two significant distribution centers in this region. A large 800-person Walmart Distribution Center is located in Tangipahoa Parish, as is the 376-person SNS Wholesale Grocers (formerly Winn-Dixie).

North Lake Division Evergreen Life Services (300 employees) provides services to over 200 residents with intellectual and developmental disabilities. Evergreen Presbyterian Ministries manages NLDELS for the Louisiana Department of Health and Hospitals.

The city of Hammond enjoys a unique location only 40 miles from the state capitol to the west and about the same distance to the North Shore business region to the east. Residents in the southern part of the parish are a relatively easy commute to New Orleans via I-55 or to the plants along the Mississippi River. As a consequence, a relatively high percentage (14%) of this parish’s residents earns their income outside of the parish.

History of Hammond MSA: After 7 Years of Stagnation - Growth

The history of this MSA from 1990 through 2017 is illustrated in Figure 33. It is apparent from a casual glance at this chart that the Hammond MSA has been through three distinct periods---(1) a period of solid upward growth from 1990-2007 followed by (2) seven years of stagnation from 2008-14, and now (3) three straight years of job growth in excess of 600 new jobs per year. In fact, in 2017 this MSA is on track to add 800 new jobs, a very respectable growth rate of 1.8%.
In a College Town Enrollments Matter

What is behind this peculiar pattern? It is important to note that the largest city in this MSA---Hammond---is very much a university town. SLU is one of its largest employers at 1,368. However, the university attracts over ten times that many students to the region, students who bring a great deal of spending power to the community.

The powerful influence that SLU has on this MSA is seen when comparing the MSA employment data in Figure 33 with SLU’s enrollment data in Figure 34 and the university’s budget data in Figure 35. Hammond’s growth phase from 1990-2007 was mirrored by a huge growth in fall enrollment and budget at SLU. Enrollment at the university jumped by 5,670 students over 1990-2005, an impressive rise of 54.5% and the budget rose a whopping 174.5%.
Hammond’s seven years of employment stagnation from 2008-2016 were accompanied by an actual decline in enrollment and generally reduced funding at SLU. Enrollment declined
from a peak of 16,068 students in the fall of 2005 to 14,594 in fall 2015---a 9.2% decline. It has dropped to 14,499 in 2016-17. The university’s funding dropped by 13.3% over 2008-13, before recovering by 12.7% the next four years. Still, by fall 2017 the budget at SLU was about $3.3 million below its fall 2008 peak.

Since it is employment we are forecasting for the MSA, the pattern of actual employment at SLU also helps us to understand the pattern of total employment in the MSA back in Figure 33. Figure 36 tracks total employment at SLU from 1993-2017. Year-to-year movements shown in Figure 36 are exaggerated a bit because the Y-axis does not start at zero. Between 1993 and 2008, employment at the university rose from 1,249 to 1,692, a gain of 443 jobs or +26.2%. This boost was one of the factors helping overall job growth to be very robust in the Hammond MSA over that period (see Figure 33). However, note that since 2008, employment at SLU has sunk to levels not seen since way back in 1995. This 324-job decline, along with enrollment drops and a lower budget contributed to the more lackadaisical nature of job growth in the region since 2008.

Fig. 36: Total Employment Southeastern Louisiana University

Healthcare Keeps MSA’s Head above Water

Economic conditions would have been much worse for this region had it not been for an energetic healthcare sector. Unfortunately, data on this small MSA’s healthcare sector are sparse. The U.S. Bureau of Economic Analysis and Bureau of Labor Statistics and Louisiana’s Workforce Commission only provide data back to 2005 and up to 2013 on the Hammond MSA healthcare sector.
What is available are data on employment at the largest healthcare system in this MSA---North Oaks Medical System. The history of employment at North Oaks is shown in Figure 37. Again, it is instructive just how closely employment at North Oaks mirrors the pattern of employment in the MSA in general. North Oak’s employment grew rapidly (+63%) over 1995-09. This is the same period when employment in the MSA was rising as well (see Figure 33). However from 2009-14, employment at North Oaks was been basically flat to declining, just like employment in the MSA as a whole. However, in the past three years, employment has picked up at North Oaks (+251 jobs) as has the job growth rate in the MSA.

![Fig. 37: North Oaks Medical System Employment](image)

**Almost Impervious to Recessions**

Figure 33 reveals another unique characteristic of the Hammond MSA over 1990-2017: This MSA is almost impervious to the impact of national recessions. There was a short U.S. recession from July 1990 to March, 1991 during which this MSA’s employment actually grew. Employment rose again during the 2001 recession, then during the Great Recession---when the U.S. lost 6.1% of its jobs---the Hammond MSA’s employment only declined 1.8%, a loss of only 800 jobs.

This resilience can largely be traced to the makeup of the region’s economy. Its huge healthcare and educational services sectors are typically touched only lightly, if at all, by national downturns. On the other hand, the durable goods manufacturing sector that typically gets
hammered by a national recession, is largely absent from the Hammond region. Only 5.3% of its employment is in manufacturing (as compared to 6.9% at the state level), and even then employment is heavily concentrated in nondurable goods manufacturing such as food processing.

**A 2017 Bump from Walmart and Southern Foods**

Another reason 2017 has been a better year for this MSA has been a nudge it received from two important players in the Parish. **Walmart Distribution Center** expanded and added 70 jobs to its workforce. **Southern Foods** tacked on 40 more jobs to its milk distribution operations. More importantly, the company moved its Brown’s Dairy milk processing facility from New Orleans to Hammond, creating 186 new jobs.

**Forecast for 2018-19: How Hard a Hit from the “Fiscal Cliff”?**

Figure 38 contains our forecast for the Hammond MSA over 2018-19. **This MSA is expected to add 600 jobs (+1.3%) in 2018 and 400 jobs in 2019 (+0.9%).** The combined 2.2% growth rate would be the second fastest rate (behind Lake Charles) in the state over our forecast period.

![Fig. 38: Hammond MSA Nonfarm Employment Forecast 2018-19](image-url)
Elevated by Several Smaller Projects

Growth in this MSA over the next two years will be prodded along by several smaller projects. **North Oaks Hospital** is in the midst of a great financial struggle due to Medicaid expansion. This hospital has one of the lowest per diem reimbursements in the state because it has a large service district with (1) no medical education component and (2) no “rural” designation. The Medicaid component of its patient population jumped from 15% to 30%, and when the hospital only gets 44 cents on the dollar for its cost of care, the results are problematic. In FY17, North Oaks is expected to report a net loss of $5 million.

In the face of these financial challenges, North Oaks has delayed construction of its proposed $25 million Women & Children’s unit. However, the hospital will still engage in $4-$6 million in capital projects over 2018-19, and will be adding 22 new doctors in the fall of 2017. Three additional employees will be needed for each new doctor, so a net employment increase of 88 new employees is expected.

In additional to the gains at the hospital, **Summerfield Assisted Living** has recently completed an expansion that will add 70 new jobs, and **Smitty Supply** is spending $6 million on two projects that will add 26 jobs. **Itralox** has a $35 million expansion underway that will create 20 new positions, and economic developers in the region are expecting **two new announcements** soon that will involve capital expenditures in the $10-$20 million range and result in 35 new jobs.

The region has about $18.3 million in **public infrastructure projects** planned over 2018-19. The largest is $9.9 million to widen Club Deluxe Road from the Livingston Parish line to Railroad Avenue. The second largest will be $4.35 million on a new Emergency Operations Center for the parish. There will also be downtown parking overlays and drainage improvements.

Mixed Signals to Commuters

In the introduction to the Hammond section of this report it was pointed out that about 14% of residents of Tangipahoa Parish work outside of the parish. This is a relatively high number for an MSA. The obvious places to which Hammond residents would commute to work are: (1) the Northshore in St. Tammany Parish, (2) downtown New Orleans, (3) Baton Rouge, and (4) the plants along the Mississippi River.

The message to these commuters about the future is somewhat mixed. A quick glance at the Executive Summary Table at the front of this report will show that growth in the Baton Rouge area should slow (not decline) over 2018-19 due to the completion of most of its industrial construction projects. Also, the “fiscal cliff” resolution will likely hit Baton Rouge hard.

The Northshore and downtown present a similar mixed message. Though there are significant construction projects in the area, there will be a downward pull from a struggling oil
and gas exploration industry and closely associated sectors (supply boat companies, for example).

On the other hand, Tangipahoa residents who work in the industrial construction business are about one hour away from one of the hottest areas of the state---St. James Parish, where billions of dollars in construction are either underway or shortly to start up.

The message is a little mixed for Tangipahoa commuters, but on the whole it looks positive. That means these commuters will be bringing more and more spendable income back to Tangipahoa Parish, which will be good for the retail trade and restaurant sectors in the parish. In fact, over 2008-16, when “covered” employment in the parish grew only 427 jobs, covered employment in retail trade was up 728 jobs and the restaurant/accommodations sector was up 1,085 jobs. Employment of Tangipahoa residents in jobs outside of the parish, really gave a shot in the arm to these two sectors.

**Drag of State Road Lettings/Danger from the “Fiscal Cliff”**

Given the positive projects mentioned above the logical question is why is employment expected to grow in this region but at a slower pace than over 2015-17? The answer is that the lift of the balloon of economic growth for Hammond is being weighed down by two significant lead weights. One is state road lettings. The state has scheduled $25.6 million in lettings over 2018-19, the two largest being (1) $6 million on helper bents on I55 and (2) $5.3 million on I12 overlay from the Livingston Parish line to the US51 business overpass. While this is all good news, the total lettings is a 15% reduction ($4.5 million) from the amount reported last year.

Of much greater concern for the Hammond MSA is how the Governor and Legislature will solve the $1.5 billion fiscal cliff it is facing next fiscal year. So far the heavily-Republican Legislature has shown little taste for solving this shortfall with tax increases. That means very substantial spending cuts may be lurking around the corner, and the problem in Louisiana is that these cuts will fall heavily on the very backbone of the Hammond economy---healthcare and higher education. Resolution of this issue will markedly impact the trajectory of the Hammond economy over 2018-19.

**THE OUTLOOK FOR THE RURAL PARISHES: 2018-19**

Back in Map 1 we illustrated where the nine MSAs are located in Louisiana. With the recent expansions to three of our MSAs and the addition of the Hammond MSA, there are now 35 of the state’s 64 parishes located in these nine MSAs. The remaining 29 parishes are designated as “rural”.

With few exceptions, most of these rural parishes have a distinctly agricultural economic base. Among the exceptions are Lincoln and Natchitoches Parishes---which are homes to relatively large universities---the coastal parish of St. Mary---which has a significant attachment to the oil and gas extraction industry---and Vernon Parish on the central Texas border which is the home parish for Fort Polk, a very large military base.
About 11.3% of the state’s employment (225,500 jobs) exists in these 29 parishes. Figure 39 tracks employment trends since 1990 in these rural parishes and provides forecasts for 2018-19.

**Recession Impact on Rural Parishes Hard**

While employment in the rural parishes is quite variable, the reader is urged to note the vertical axis in this graph. Since 1990, employment in this region has only varied over a range from a low of 210,000 to a high of 241,000—not as wide a fluctuation as may appear initially. Having noted that, this region’s employment is **very sensitive to national recessions**. In the early 1990s’ recession rural employment fell for three straight years. Rural parishes lost 15,200 jobs, a drop of 6.6 percent. Then in the post-9/11 recession, rural region employment fell hard for two years—a loss of 17,100 jobs or seven percent. During the Great Recession, rural employment fell for four straight years by a total of 5.5%.

Employment in rural areas actually started to decline a year before the initiation of the Great Recession. The housing bubble burst started in 2007 and this led to layoffs and closing in several of Louisiana’s large **wood products firms**. These firms tend to be concentrated in rural parishes. For example:

- **Weyerhaeuser Corporation** laid off 185 at its facilities in Lincoln and Winn Parishes.
• **Weyerhaeuser Corporation** laid off 39 at its Bienville Parish site.

• **Hunt Forest Products** temporarily idled its Natalbany facility in Tangipahoa Parish.

• **Boise Cascade** indefinitely curtailed 130 workers at its plywood veneer plant in Allen Parish.

Bad news in the wood products area was partially offset by good news in those parishes with ties to the extraction industry. **Red River Parish** had an especially good 2009-10 due to flourishing drilling activity in the Haynesville Shale in the northwestern part of the state. In the **coastal parishes**, offshore drilling in the Gulf was strong until the BP spill, then large sums of money came flowing into these parishes for cleanup work or in claims payments made to businesses and individuals. This was enough to keep rural losses from their typical routine of experiencing losses greater than the nation.

**Some Recovery: 2012-13**

Note that the rural area of the state had two years (2012-13) of recovery from the Great Recession but remained well shy of its pre-recession employment mark. By 2013, the region was 8,500 jobs away from its previous 2006 peak.

Having noted that, it is important to note that the area enjoyed some nice announcements post Great Recession. Among the positives are:

• In Bogalusa **General Dynamics** opened a call center that handles government healthcare calls. GD opened its facility in the summer of 2013 and now employs over 600 people.

• **Gulf Coast Spinning** announced it would build a $130 million new cotton spinning facility at the Bunkie Industrial Park. Over 300 jobs were to be created at the plant, paying an average annual wage of $30,100.

• In Urania, **German Pellets GmbH** began construction the world’s largest wood pellets manufacturing plant, capable of producing 1.1 million tons of pellets a year. About 150 employees were announced for this plant in LaSalle Parish.

• **Universal Plant Services** recently completed its $3.9 million plant in Jena in LaSalle Parish. The firm hired 95 employees who work on welding, fabrication, and equipment overhaul and repair.

• A real success story for Ruston in Lincoln Parish is **Mortgage Contracting Services**, a firm that protects and preserves vacant properties for mortgage companies. MCS doubled the size of their facility to 200,000 square feet and added 90 new jobs.

• **Conagra** built a 2-phase sweet potato processing plant in Richland Parish adding several hundred jobs.
• **Metal Shark Boats** in Jeanerette secured a $192 million contract with the Coast Guard to construct 500 patrol boats. The firm added 100 workers to its workforce.

The 2014-16 Decline

Sadly the recovery in rural Louisiana was short-lived. The region went into a free fall over the three years from 2014-16. No small part of this decline is associated with the deteriorating exploration market. The rig count plummeted in the rural parishes in the Haynesville Shale region in northwest Louisiana. St. Mary Parish on the southern coast is host to numerous firms that service the offshore exploration industry. Specifically, Danos & Curole terminated 80 people from their relatively new site.

Shipyards in these rural parishes in south Louisiana suffered as well. Three Bollinger Shipyards in the Amelia and Morgan City areas halved their employment from 700 to 350, but the shipyards are diversifying into barges, flood gates and other civil work and do not anticipate further layoffs. Other shipyards and fabricators in St. Mary Parish have reduced employment and begun moves to diversify their client bases out of oil and gas and into other areas.

In Vidalia, Fruit-of-the-Loom closed its plant ending 167 jobs. Gulf Coast Spinning stopped completely construction of its facility in Bunkie. Construction delays and cost over-runs drove the new German Pellets plant in LaSalle Parish into bankruptcy. Life Care Specialty Hospital in Ruston closed its doors at the cost of 167 jobs.

2017: Back to Growth

It is apparent from Figure 39 that the rural areas of Louisiana began to grow again in 2017. Several factors prodded this turnaround. Drax Biomass took over construction of the wood pellets plant in Urania from German Pellets GmbH and should have the plant opened in fall 2017. A total of 125-150 permanent jobs will result. Monster Moto completed its $4 million manufacturing facility for mini-bikes and go-carts in Ruston. At 25 jobs now, plans are to pump this employment number up to 287 over 10 years.

Foster Farms has a $30 million upgrade underway to its poultry processing plant. The project should be finished in fall 2017 and add 50 new jobs. Cleco is nearing completion of an $80 million clean energy plant in St. Mary Parish that will take waste heat from Cabot’s carbon black plant and generate electricity for 17,000 homes. This new site will employ 20 people.

Forecast for 2018-19: The Rebound Continues

As seen back in Figure 39, we are projecting 2,300 new jobs (+1%) in rural parishes in 2018 and 2,200 more jobs (+1%) in 2019. Several factors are in play behind this rather optimistic forecast.

• One of the really bright lights in the rural area is Metal Shark Boats, a company that manufactures vessels out of aluminum. Starting with only 40 employees and one facility
in 2014, Metal Sharks now has about 160 employees and three facilities. The firm is adding a finishing plant for painting and blasting, a new administration building, and a large vessel fabrication facility. Metal Sharks was selected by the Navy to build Near Coastal Patrol Vessels for U.S. partner nations. In June, the company landed a $54 million contract for 13 welded aluminum cutters, and recently the company completed six 88-foot high-speed passenger vessels for the New York Ferry Service. It delivered the first six of 18 45-foot patrol boats to the Vietnam Coast Guard.

- Large sums of money are being spent to build pipelines mainly in rural areas. Kinder Morgan is spending $170 million to build a pipeline called the “Southwest Louisiana Supply Project”. Tennessee Gas Pipeline will employ 300 people to build a natural gas compressor station in Franklin Parish and extend its compressors and pipelines in Madison Parish. Total project cost is $170 million.

- Calpine Corporation will spend $200 million to complete a 360-megawatt, gas-fired power plant started in 2001 but abandoned. Dubbed the Washington Parish Energy Center, the plant will be completed in about 2 ½ years and be turned over to Entergy to operate.

- Property has been purchased for $40 million to construct a $127.8 million railcar storage, repair and cleaning facility in Lacassine. BOE Mid-Stream has dropped out of this project but we understand it is still alive and will employ 300 workers when completed.

- The Hazelwood Energy Hub project near Port Barre is at the permitting stage. A $400 million project to store and blend 10 types of oil held in storage tanks and salt domes, this facility will employ 123 people at $63,500 annually.

- Roy O. Martin has 1,150 people employed at three facilities in rural areas of the state and expectations are those numbers will remain stable over the next two years. The company is in the early stages of examining cross laminated timbers, a wood replacement for steel and concrete in buildings that is already used in Europe.

- Rural areas will be significant winners on the state road lettings list. At $433.9 million last year, this number has been bumped up to $448.1 million over 2018-19. Among the top projects are:

  - $30 million for new bridges on the I10 overpass over US165 and MP Railroad.
  - $27 million on anchoring pier rehabilitation on the Mississippi River Bridge.
  - $21 million to clean and paint the bridge over the Atchafalaya on US190.
  - $17 million to rehabilitate the I20 bridge over the Mississippi River at Vicksburg.

- Foster Farms in Farmerville has announced a $30 million upgrade to its poultry processing plant that will produce 50 new jobs. More than 100 growers serve this facility.
As the economies of all nine MSAs—along with the rural areas—were examined above, it should have been clear that the problems in the oil patch were more than sufficient to offset the industrial boom occurring in Lake Charles and along the Mississippi River from baton Rouge to New Orleans. Louisiana has been in a recession as indicated in the last shaded bar in Figure 40, which traces the employment history of the Louisiana economy form 1980 through 2017.

The more encouraging note from the data in Figure 40 is that it appears Louisiana has turned the corner and started to grow again. The change in year-over-year monthly employment in 2017 is shown in green in the upper left-hand corner of this figure. Notice that the blood-letting fully stopped in May 2017 and since then employment has begun to grow again in the state. We estimate the state will show a net growth in jobs of 8,000 (+0.4%) for 2017.
Seasonally adjusted employment numbers for Louisiana indicate the recession began in September 2015 and lasted for 20 months, with the last down month being April 2017. The state lost 24,600 jobs during this recession, a decline of 1.2%. Note in Figure 40 that as difficult as this period has been, it was actually one of the shortest and shallowest the state has been through over the past 37 years. This is not to down play the horrendous impact the recession had on the oil patch---especially Lafayette and Houma. It does reveal how important the industrial boom has been in off-setting oil-patch losses.

**Forecast for 2018-19: Is 2,000,000 Finally Reachable?**

Economies of each of the state’s nine MSAs and its rural areas have been examined in detail above. What is the result when one adds them up? The answer is shown in Figure 41, which tracks total employment in Louisiana over 1980 through 2017 along with our forecast for 2018-19.

![Fig. 41: Louisiana Non-Farm Employment: Forecast 2018-19](image-url)
Our modelling suggests Louisiana will continue to rise out of the doldrums in 2018-19, **adding 12,000 jobs in 2018 (+0.6%) and another 22,300 jobs in 2019 (+1.1%).** It is instructive to see in Figure 41 how the state has toyed with the 2,000,000 employment mark since the early 2000s. Each time this mark was approached a combination of national recessions, horrific hurricanes, or an oil price collapse jerked the state back from breaking this barrier. Will history keep repeating itself or will 2019 be the year? Our forecast is for 2,013,600 jobs in Louisiana in 2019.