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OUTER CONTINENTAL SHELF IMPACTS, MORGAN CITY, LOUISIANA

University of Southwestern Louisiana

June 30, 1977

Research Team

E.F. Stallings, Project Director

T.F. Reilly, Editor

R.B. Gramling, Jr.

D.P. Manuel

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PREFACE

This report is the result of a one year effort directed by the research team. It involved approximately ten faculty members and ten students. The authorship of each chapter is separate and thus the style may vary somewhat. Round table discussions and numerous consultations were held among the authors to insure continuity and compatibility. The labor survey of the study area was subcontracted to the Morgan City, Berwick, Patterson area Chamber of Commerce and was conducted under the direction of Mr. Luke Trahin, Executive Vice President.

The authors wish to acknowledge the excellent cooperation received from the various individuals associated with the study area. Their kindness made our task much easier.

Lafayette, Louisiana

June 30, 1977

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SUMMARY

Over the period 1954-1972, OCS oil production increased from 3.3 million barrels to 389.2 million barrels. Comparable production of oil within three-miles of Louisiana's coast increased from 12.6 million barrels in 1954 to 63.4 million in 1972. Gas produced in the Louisiana OCS area totalled 2,888 billion cubic feet in 1972, while production inside the three-mile zone was 592 billion cubic feet.

Employment, Income, and Occupations.

Morgan City and St. Mary Parish have benefited immensely from the development of OCS petroleum and natural gas. Over the years 1940-1970, total employment in St. Mary Parish has increased 89.5 per cent. In the United States, total employment increased 74.9 per cent and in Louisiana, the gain was 56.2 per cent. Within St. Mary Parish, more than 12.0 per cent of total employed persons work in the mining sector, which is primarily comprised of the oil and gas industry. It is a conclusion of this study that the growth of OCS activity as evidenced in the high regional share effects of St. Mary Parish is directly and indirectly responsible for approximately 20 - 35 per cent of the employment in St. Mary Parish and Morgan City.

Parish income has increased twice as rapidly as did that of Louisiana between 1947 and 1973. While much of this increase is due to national growth, the regional share component in St. Mary Parish indicates that its local and regional advantage lay in the proximity to OCS activity and was responsible for much of this growth.

Generally, the change in occupations that has occurred in Morgan City has been a result of the demands placed on the labor market by the various industries in oil and gas production, exploration, drilling, field services, and onshore support activities. As a result, many of the workers in operative, craftsman, and managerial positions are highly paid. The median income, therefore, tended to be higher in Morgan City than in St. Mary Parish or Louisiana, and the distribution of income in the city was more equitable than in these other two larger areas.

Social and Cultural

Increases in income and available jobs, as well as the demand for specialized skills, have led directly to major population growth in Morgan City and St. Mary Parish. Many of the available jobs are essentially blue collar in nature, but pay well enough to entice migrants who eventually become permanent residents.

One problem which may be related to the increased purchasing power of blue collar workers is that a middle-class professional, such as school teachers, may be lured away from essential jobs because they could move to other areas and occupy a relatively higher position in the economic and status hierarchy.

The obvious success of the parents of young people in the Morgan City and St. Mary Parish area has resulted in a low out-migration by young people seeking employment, as they are presented with a realistic role model of economic success. This can be achieved through vocational training at the local level in a relatively short time at a low cost.

As these trends continue, assuming that economic activities of the petroleum industry do not decline, continued growth in the physical size and population mass is to be expected. Continued physical growth is one of the potential sources of problems which is a by-product of growth in the petroleum sector. There may be problems in terms of planning for expanded police protection, transportation, municipal services, and providing for recreational opportunities if the rapid growth continues. Problems which could be particularly acute would be in highly specialized service areas such as hospitals and other forms of health care. In addition, it seems that St. Mary Parish could benefit from increased investment in educational and vocational services.

Another major problem demanding attention which was precipitated by rapid population growth and increased purchasing power of the individual worker is the acute shortage of single-family dwellings. This may result in people living outside of Morgan City and even St. Mary Parish, in order to have a home of their own. Thus, the tax base for Morgan City might stabilize while the demand for municipal services is increasing.

The only apparent change in population composition that can be anticipated is the continued increase in the white versus black ratio. There appears to be no shortage of people in the productive ages nor any major imbalance in the number of elderly people.

Municipal Services.

OCS activities and the related population growth have placed great strains upon the ability of the community to provide adequate levels of services and facilities. The tax base has gaps, especially in that many who avail themselves of the services and facilities live outside of the study area. A considerable lag exists in meeting these needs. In spite of such problems, community support for the oil and gas industry is very strong, and it is felt that the benefits accruing to the community far outweigh any difficulties.

Land Use.

Land use changes have occurred on a large scale. Primarily they have involved a shift from agricultural uses to urban, residential, and industrial uses. Also, some swampland has been converted for these same three uses. OCS related industries have required land primarily for siting purposes. A second major impetus for changes in land use patterns has come from the rapid population growth and the associated needs for more land.

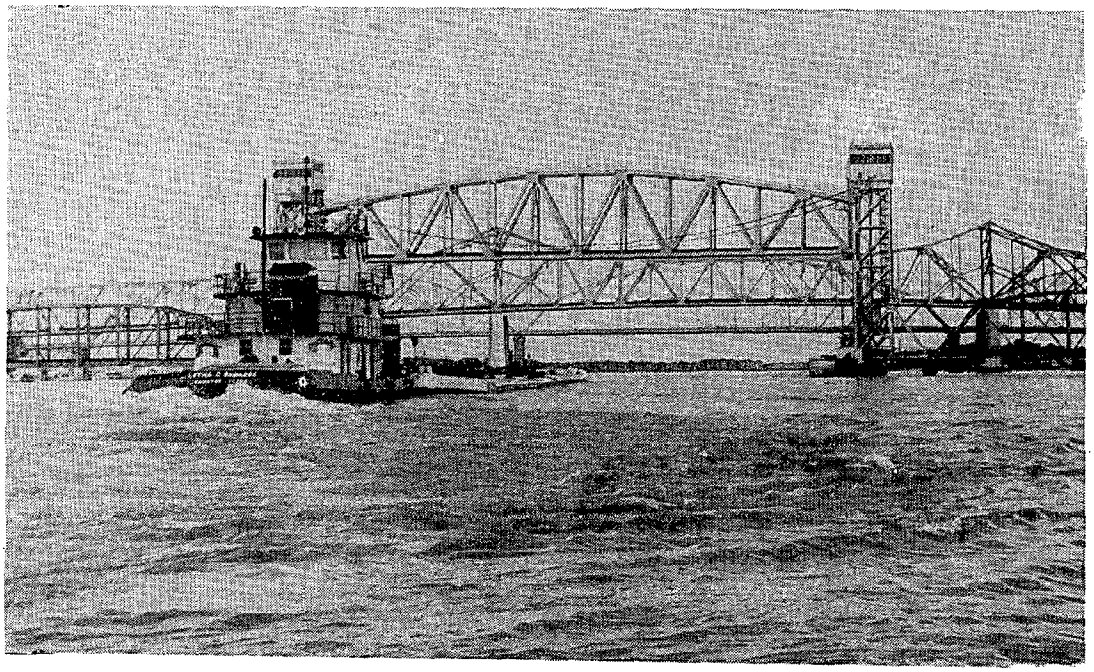
Environmental Impact.

Environmental impacts, including pollution, directly associated with OCS activities have been small. They have generally resulted from dredging activities and from the conversion of swampland to industrial sites. Indirect impacts have occurred on a considerable scale and are most frequently those associated with rapid population growth and its attendant requirements.

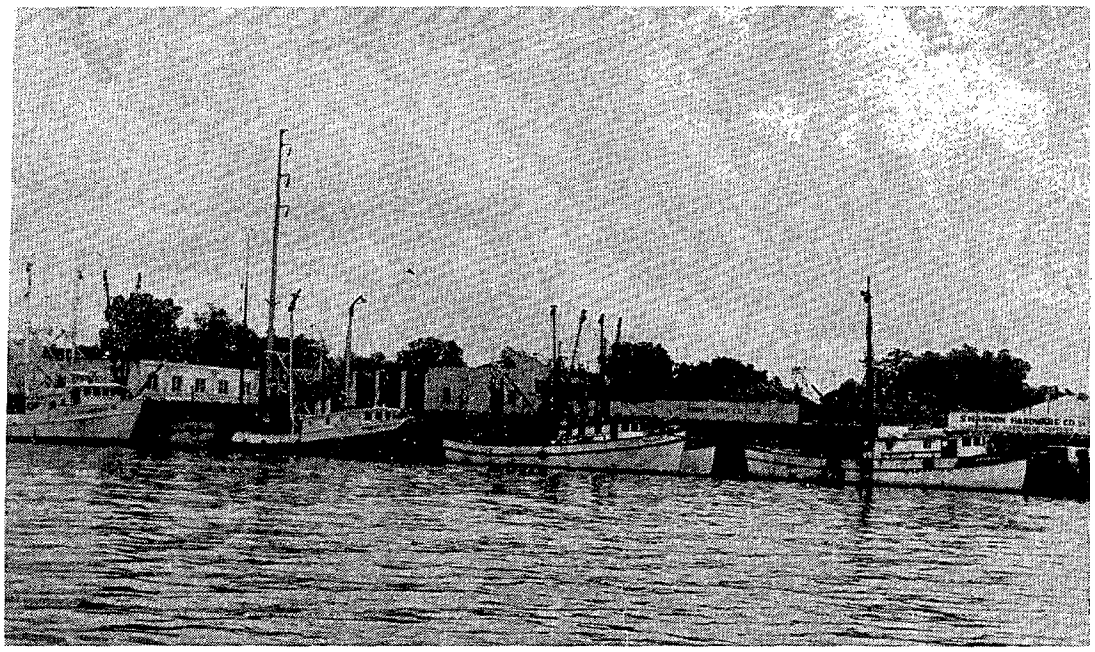
While there are obviously both positive and negative impacts of OCS activities, in the opinion of the citizens of Morgan City, the advantages far outweigh the disadvantages. However, should OCS activities decline in the area, major disruption of the social and economic life of the community would occur.

Ferry boat crossing the Atchafalaya River between Brashear City and the present location of Berwick (1866). Courtesy Center for Louisiana Studies, University of Southwestern Louisiana.

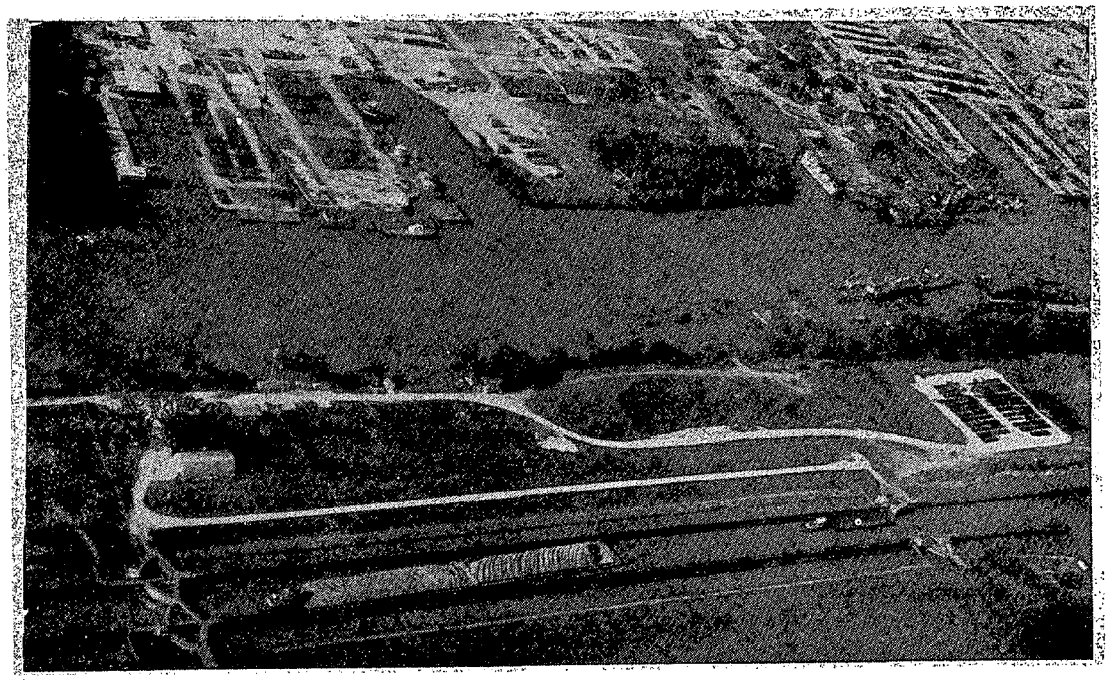
The Atchafalaya River between Morgan City (upper right) and Berwick (lower left). Note the new four-lane bridge nearing completion in center.



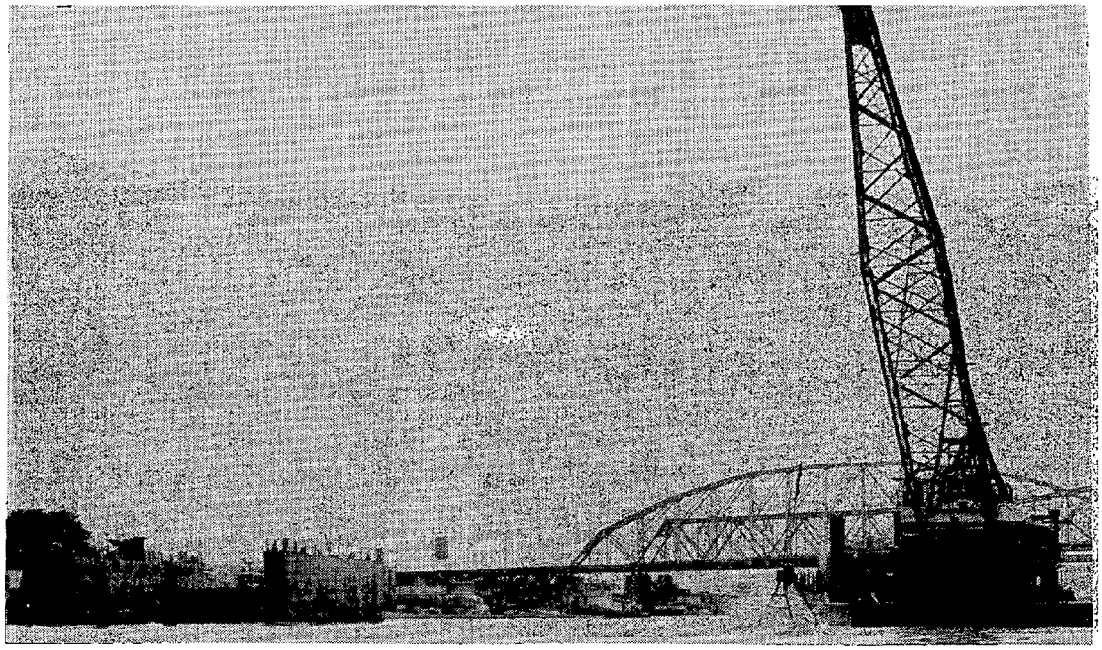
Push boat and barges moving up river at Morgan City.



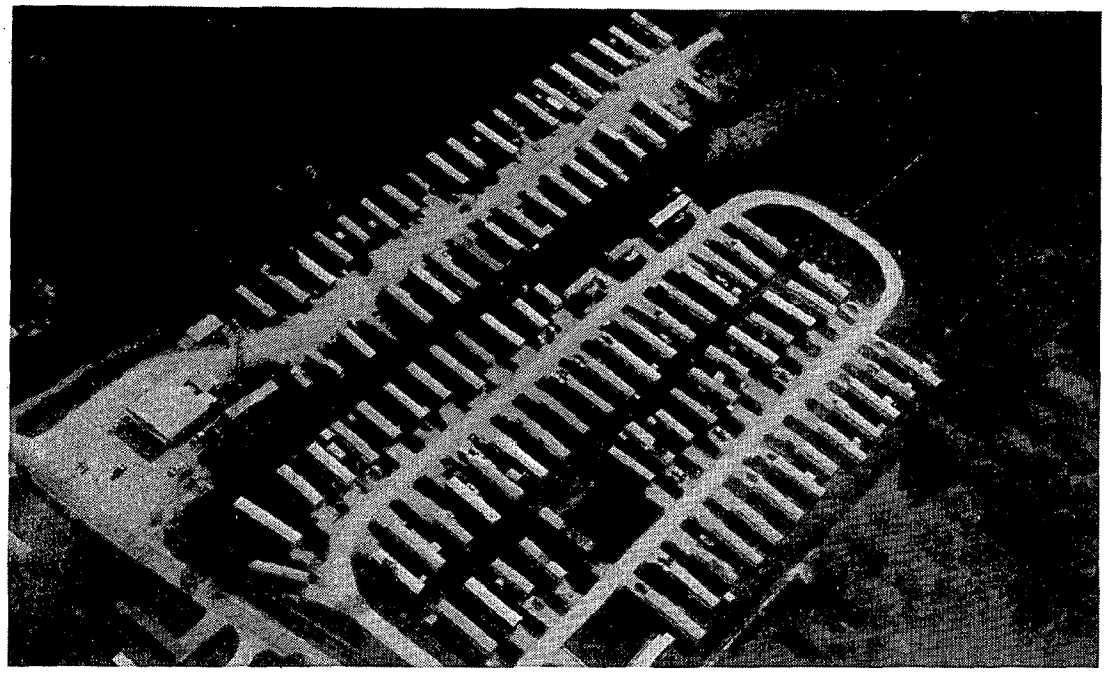
Part of the remaining shrimp fleet at Morgan City docks.



Bayou Boeuf Lock (foreground) with commercial water front usage along the Intracoastal Canal (center).



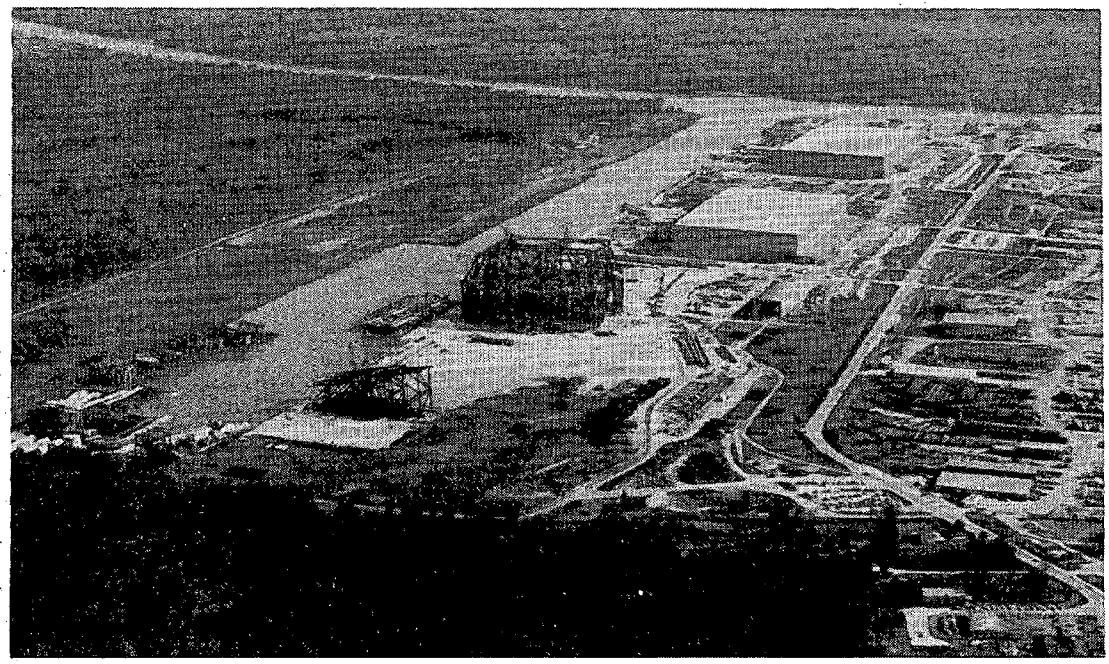
Dredging the Atchafalaya River Channel at Morgan City. Siltation is a continuing problem here.



Trailer park east of Morgan City. An attempt to ease crucial housing shortages.

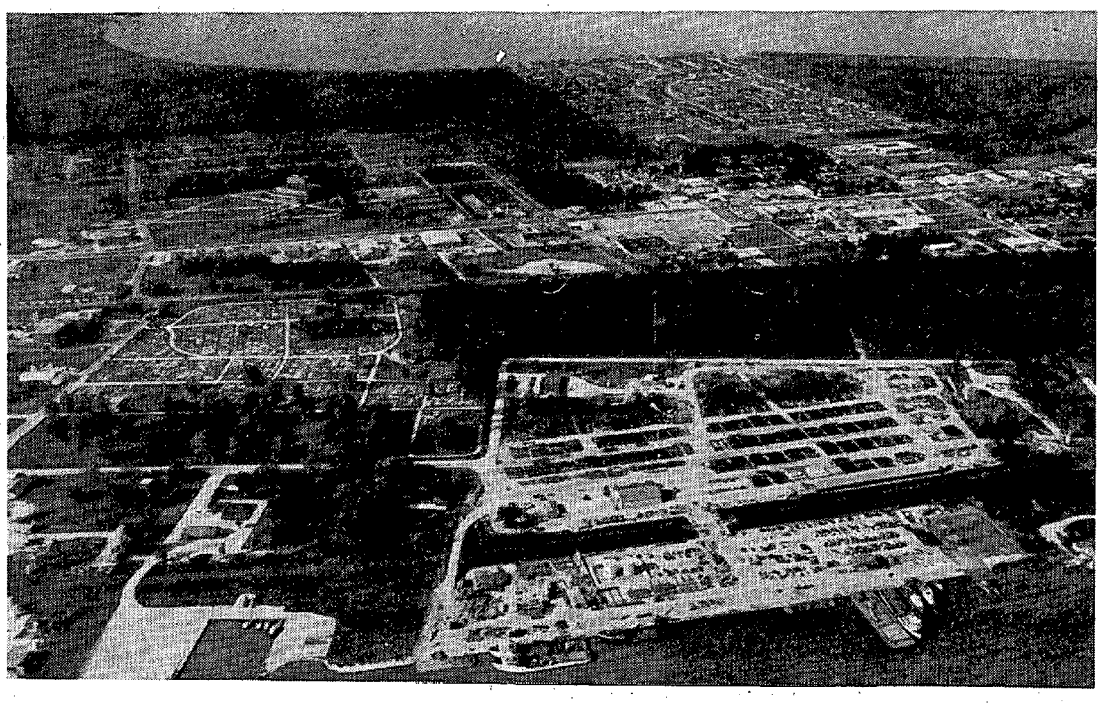
A pipeline corridor passing through a residential area in Bayou Vista. Note how little land is actually lost to the corridor.

Pipeline corridor running toward the coast, south of Bayou Vista.

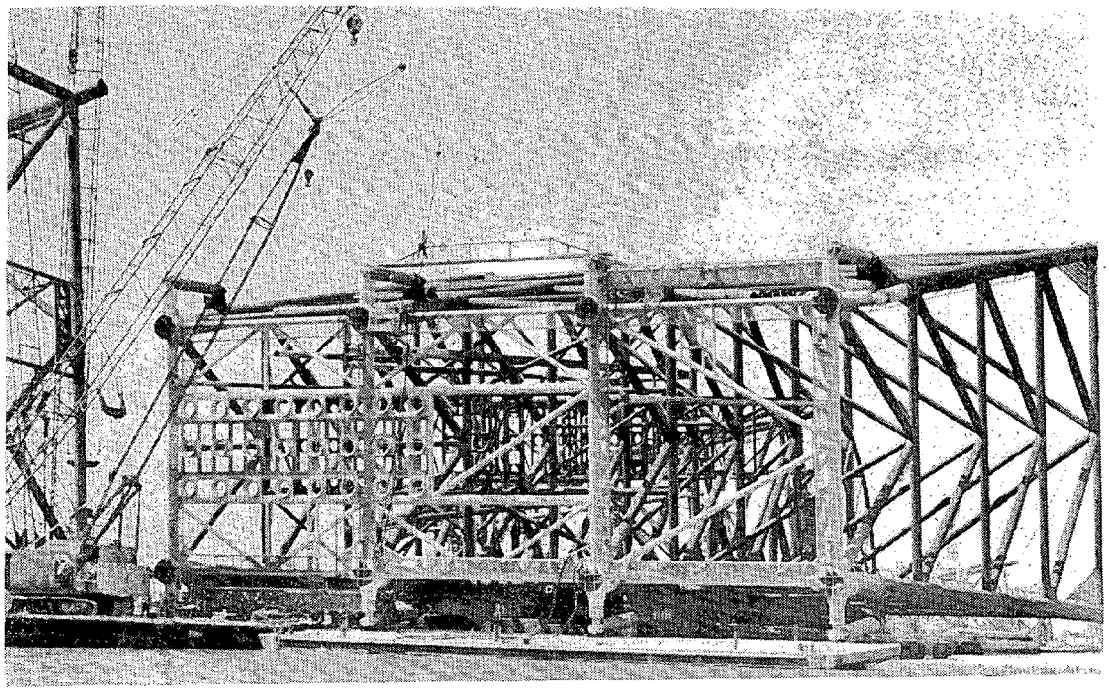


Platform construction on Bayou Boeuf east of Morgan City.

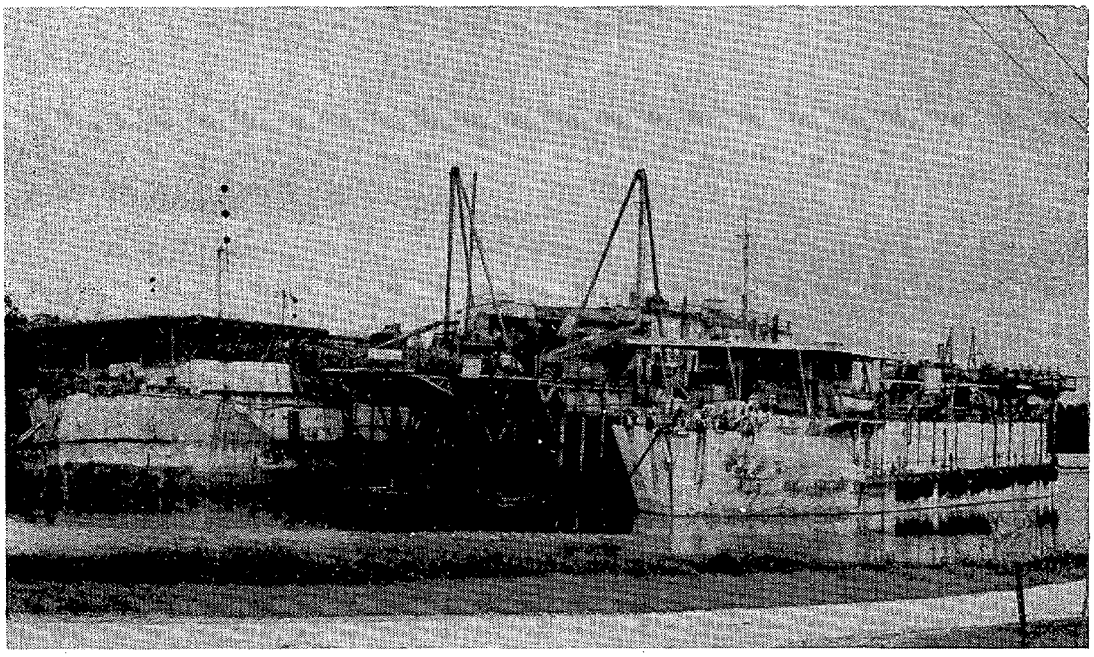
Shipyards with ongoing rig construction on Bayou Boeuf.



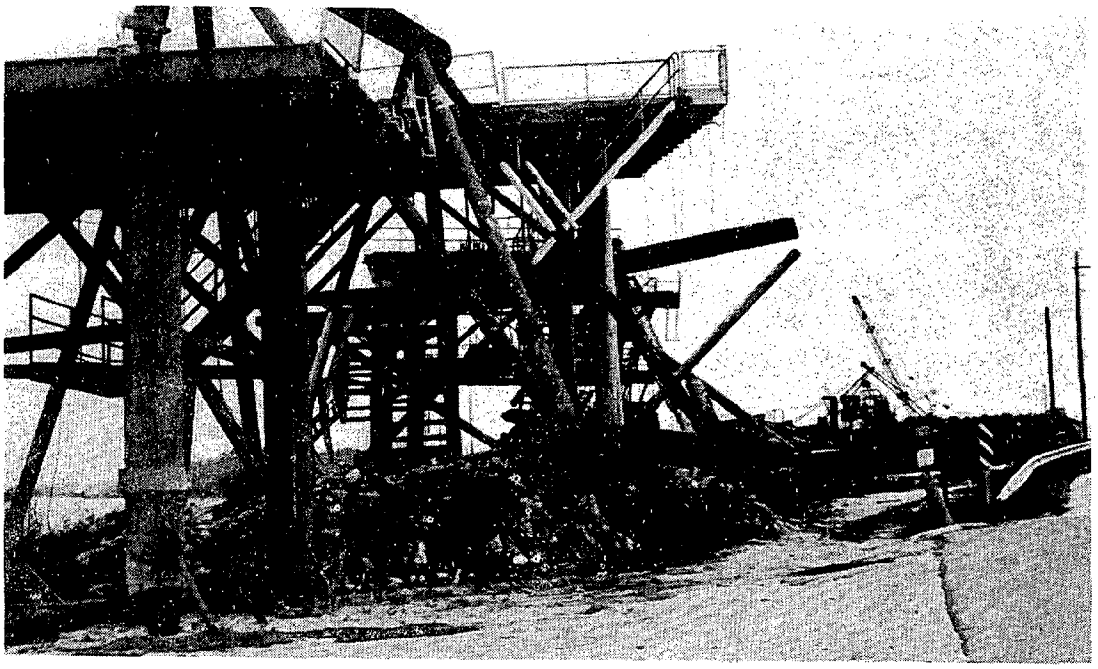
Pipe yards on the Intracoastal Canal (lower right). Note the residential area (upper, right, center) bordering on Lake Palourde. This neighborhood is built on recently filled wetlands.



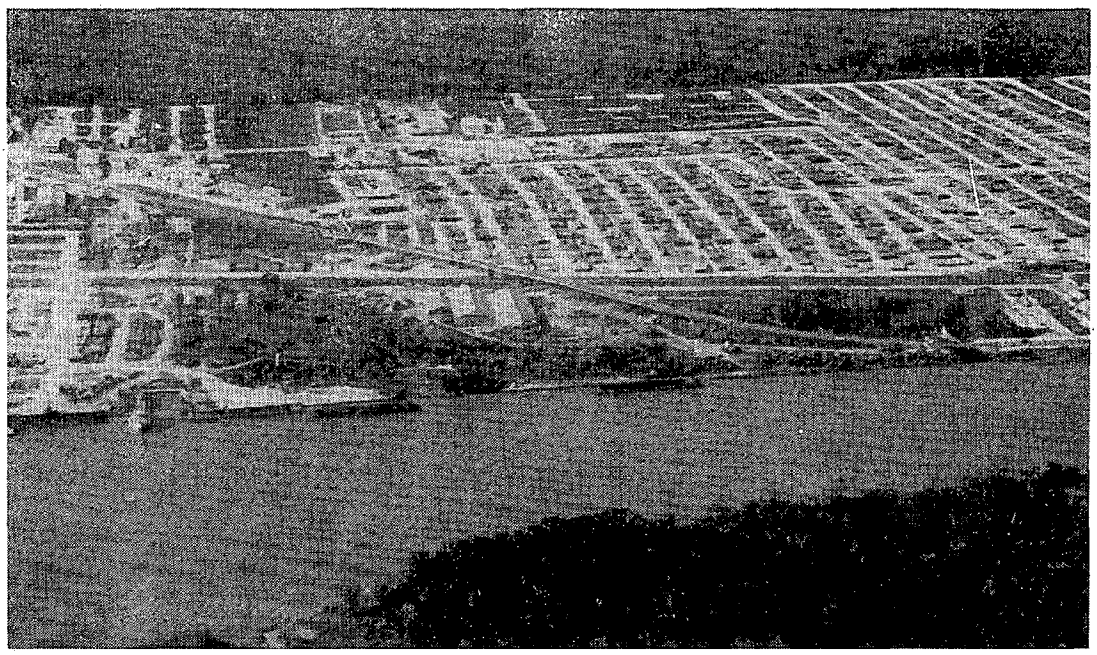
A production platform loaded on barges at Bayou Boeuf for transportation to the Gulf. Note the collars (left center of platform) used to guide the drilling of production wells.



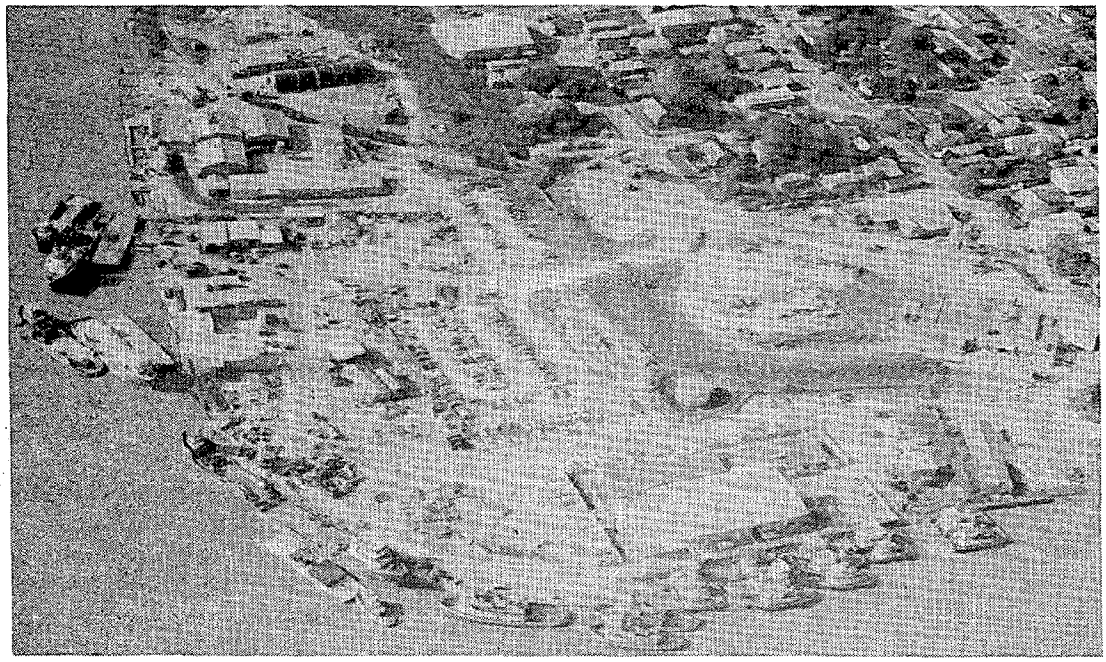
Abandoned drilling platform of the type used in early offshore exploration.



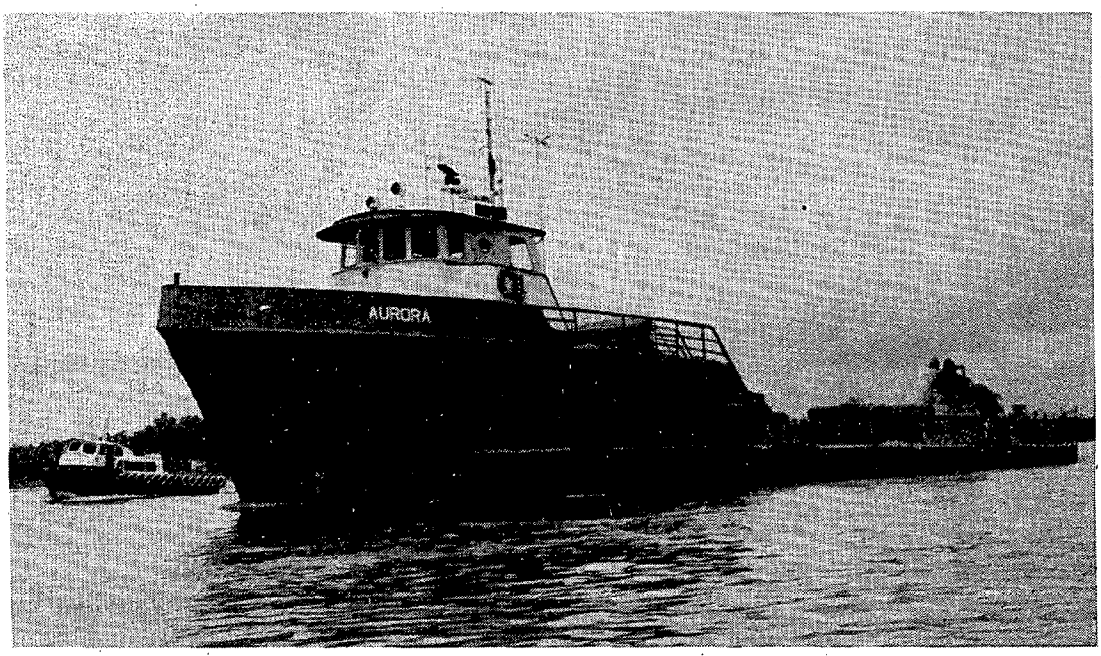
Scrap yard on U.S. 90 and the Intracoastal Waterway east of Morgan City. Not pretty, but ecologically sound.



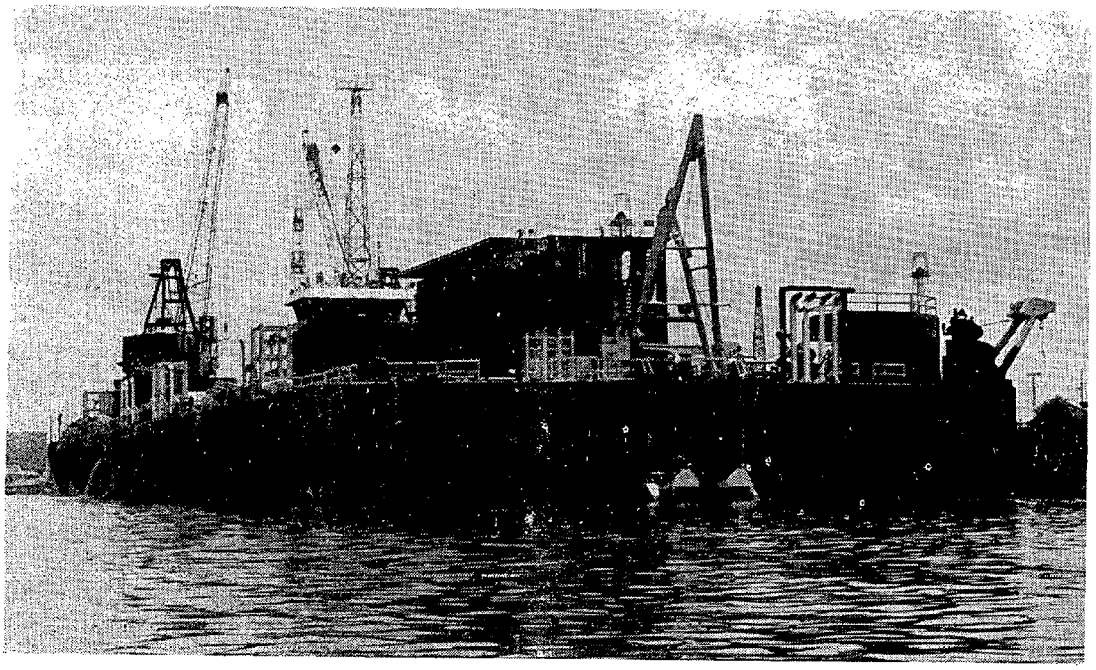
Pipe yards on the Intracoastal Waterway east of Morgan City.



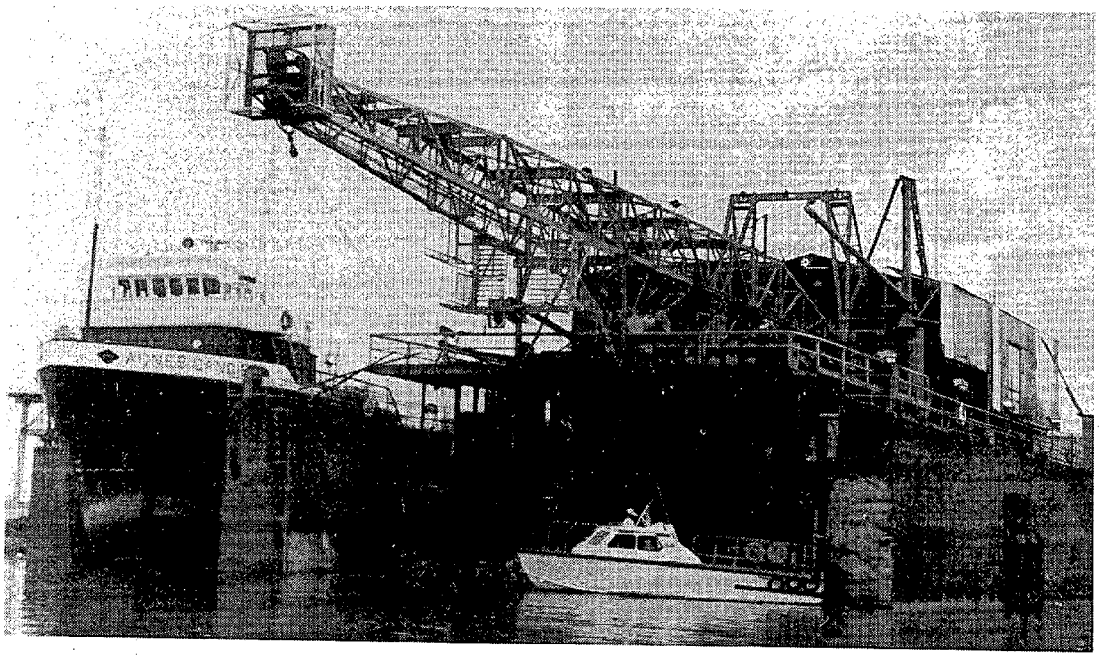
Tug boats docked at the conjunction of the Atchafalaya River and the Intracoastal Waterway.



A work boat (used for hauling pipe, cement, mud, etc., offshore) and a crew boat (used for hauling employees and supplies) heading down the Atchafalaya River at Morgan City.



A pipe laying barge docked near Morgan City.



Work boat (in dry dock), crew boat, and drilling barge docked at Morgan City.

PHYSICAL SETTING

E.F. Stallings, Author

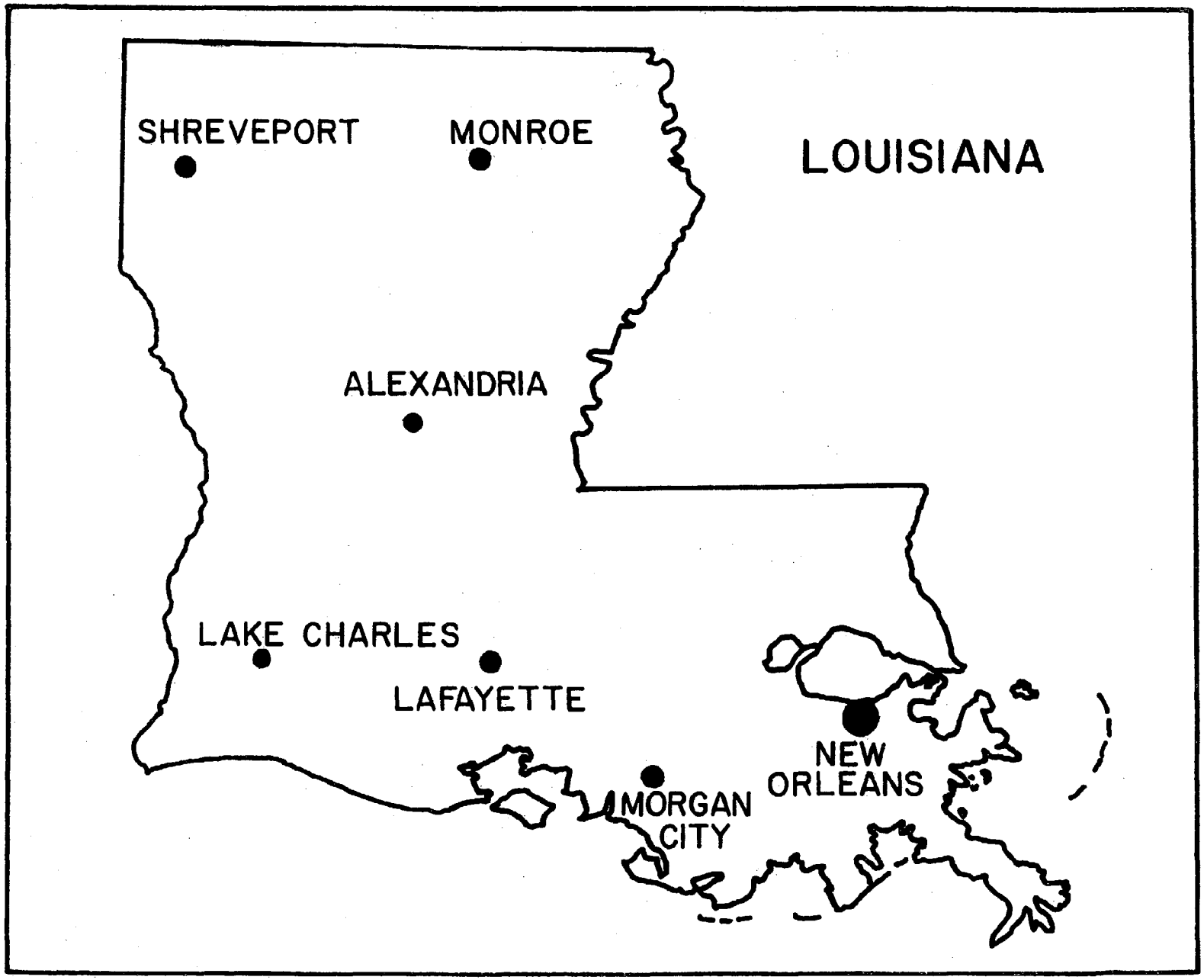
Charles Durio, Research Assistant

GENERAL INTRODUCTION***MORGAN CITY

Morgan City lies in South Louisiana 92 miles west-southwest of New Orleans, 69 miles southeast of Lafayette and 98 miles south of Baton Rouge (See map, next page). It is on the east side of the Atchafalaya River approximately 18 miles from Atchafalaya Bay which opens into the Gulf of Mexico. The Gulf Intracoastal Waterway passes along the south edge of the city and joins with the Morgan City alternate route to Port Allen/Baton Rouge at the Atchafalaya River. Highway access is provided to Lafayette and New Orleans by U.S. 90 and to Baton Rouge by La. 70, La. 69, and La. 1. Air transportation is provided by a Helioport at Amelia operated by Petroleum Helicopters Inc. and a general aviation airport at Patterson.

Morgan City forms part of an urban complex consisting additionally of the City of Berwick lying just across the Atchafalaya to the west, the unincorporated area of Patterson further west along a bend of the Teche/Lower Atchafalaya system, and the unincorporated area of Amelia to the east along Bayou Boeuf (See land use maps inside back cover for specific location).

The economic base rests on agricultural activities to the west, transportation, fishing and the oil and gas industry. Formerly fishing and forestry accounted for relatively greater economic contributions. The swamps have long since been cleared of cypress and that industry is now defunct. Port activities associated with fishing have become dispersed along the coastal zone as more facilities have been made available and refrigeration equipment installed on individual vessels.


SHREVEPORT
MONROE
LOUISIANA
ALEXANDRIA
LAKE CHARLES
LAFAYETTE
NEW ORLEANS
MORGAN CITY

PHYSICAL SETTING

Climate, Morgan City.

The Morgan City area differs little climatically from other Gulf Coastal regions from Houston to Apalachicola, Florida. The overall climate is humid subtropical with marine influences predominating during the summer. In the winter there are alternating periods of moist marine air and cool, dry continental or Arctic air. Temperature variations are large, on a daily basis, only when warm, moist tropical air is suddenly displaced by Canadian or Arctic air as a front passes. Otherwise the temperature variations tend to be small and somewhat less than for stations farther north due to the proximity of water bodies, swamps, and marshes.

The mean temperature ranges from a low of 54.3°F. in January to a high of 82.4°F. in July and August.[1] The mean annual temperature is 69.3°F. Precipitation ranges from 3.67 inches in October to 8.36 inches in July with a mean annual rate of 64.33 inches. Temperatures below 32°F. occur on only a few days during the winter and temperatures in excess of 100°F. are very rare.

Severe weather is sometimes experienced. Thunderstorms can be expected 70-80 days a year and upon occasion are accompanied by small tornadoes, high wind, and hail.[2] Most of these storms cause little, if any, damage on the ground. Aircraft and small boats do not always fare so well. Winter storms are common but generally not severe. Tropical cyclones or hurricanes pose a greater threat. The two most severe hurricanes occurring so far in this century for the Morgan City area were Betsy in 1965 with 122 mph winds and an unnamed storm in late August of 1926 with winds estimated at 100 mph.[3] Much of the danger is from tornadoes accompanying imbedded thunderstorms and flooding, either from excessive rainfall, storm surges, or both. Since 1893 seven major hurricanes have been recorded in the Morgan City area with approximately 20 lesser hurricanes.[4]

OCS activities are influenced by the weather in several ways. Major disruptions of activities are caused by hurricanes and lesser tropical storms. However, damage is usually light to platforms and facilities. Advance warnings by the Weather Bureau are especially valuable in preparing for a storm. Any drill rigs or crew boats actually caught in the storm are subject to heavy damage or sinking either through wave action, hitting a platform, or both. Occasionally a severe winter storm causes similar problems. Fog and severe thunderstorms are likewise troublesome especially to helicopters and other aircraft. In the Morgan City area more serious problems have resulted from flooding caused by a combination of locally heavy precipitation and high water on the Mississippi and Atchafalaya rivers.

Soils/Agricultural Practices.

The soils of the Morgan City area are primarily of two associations, those of the low Mississippi River Terraces and those of the bottom lands. These soils consist of alluvium brought down by the Mississippi River system

during successive deltaic periods. Deposition was generally in shallow bodies of water or along streams or channels where natural levees resulted. These natural levees develop when overbank flow occurs with a resultant decrease in velocity causing deposition adjacent to the channel. Coarser particles are dropped nearest the channel with the finer particles being found farther away. These natural levees, with an elevation of from three to ten feet, are the highest land in the area with the exception of a salt dome some 17 miles away where surface uplift is evident. The levees vary in width from a few feet, generally near small or recent channels, to a distance of several miles. The rest of the land is generally swampy with numerous streams and bayous and lakes, both large and small.

Settlement is usually concentrated along these natural levees where frequent flooding does not occur because of natural or human alterations to stream flow. Drainage here is often a minor problem that can be controlled by gravity flow in ditches although leveeing and pumping are sometimes necessary. As discussed in another section of this report, the potential for major flooding exists should certain critical levees give way during times of high water. On the bottom lands flooding and the difficulties of drainage are major impediments to agricultural or other uses of the land.

Where the elevation is adequate for good drainage the soils tend to be fertile with leaching somewhat retarded by the low permeability of the soil. The major crop is sugar cane with substantial amounts of soybeans and other crops grown. There is little or no agriculture immediately adjacent to Morgan City. There are a few pastures in the vicinity of Amelia but little else to the east. To the west of Berwick agricultural activities are much more in evidence. The area of natural levees between Berwick and Patterson is farmed rather extensively except where urban, residential and commerical users have preempted the land. The swampland soils tend to be good if drainage is accomplished, although tillage may be more difficult than on the levee soils. The marsh soils are very difficult to use, even if drained, due to the large organic content and slurry-like nature. Oxidation and subsidence pose further difficulties.

Morgan City, Berwick, Patterson and Amelia were founded at sites on natural levees associated with Bayous Teche, Boeuf, and the Lower Atchafalaya. Morgan City, Berwick and Amelia have grown beyond the bounds of this high land into diked and filled areas of bottom land. Problems associated with diking, filling, and drainage have slowed the growth of the aforementioned areas. Environmental concerns and associated permitting requirements are impediments to further expansion, especially for Morgan City proper.

Higher land, generally used for farming, has been available between Berwick and Patterson but development of subdivisions has been limited primarily by the difficulties of daily commuting over the one (two-lane) bridge into Morgan City. A new four-lane bridge was completed this year (1977) and is now open to traffic. It is expected that much of this high land will be converted to residential or commercial uses.

Industrial expansion toward Patterson has been limited for the same reasons and additionally the small size of the Berwick Lock. Large vessels and tows are not able to get into the Lower Atchafalaya/Teche system. The dimensions of the Lock are 45' x 300' with a sill depth of 9.8' below mean sea level.[5] An initial hearing has been held by the Corps of Engineers where strong sentiment was expressed for the enlargement of the lock. Some of the participants at the hearing expressed the opinion that a larger lock would be of especial value to the area in the event of a slowdown of oil and gas operations, in that it would be easier to attract other types of activities with improved navigation facilities.

The demand for land, as noted previously, has resulted in the use of reclaimed bottom lands by the oil and gas industry as well as by other commercial, urban, and residential users. In this reclaimed land subsidence makes necessary carefully constructed and strong foundations and special attention to gas and water lines to prevent and or detect breakage.

Vegetation.

The vegetation in the study area is strongly related to drainage. The better drained natural levees have as predominant species the following:[6] live oak, red oak, water oak, sweetgum, and hackberry. Volunteer grasses are: bluestem, vasyegrass, dallisgrass, bermudagrass, johnsongrass, and crabgrass. Much of this area has been cleared for urban, residential, or agricultural uses so that the original natural vegetation is not much in evidence.

Most of the remaining area is fresh-water swamp and bottom land where the following species predominate:[7] cypress, tupelo gum, swamp bay, swamp maple, willow, sycamore, and cottonwood. The sound mature cypress was cut during the earlier part of this century and that remaining is either unsound or second growth. The second growth cypress is still immature and to date has not attracted any large-scale lumbering operations. Settlement in these areas requires diking, filling, or both. Much of Morgan City and some of the industries to the east have been built on this type of land.

Flooding.

The land in the Morgan City area is low-lying and alluvial in origin. It was formed under conditions associated with delta building, primarily of the Mississippi River system. Morgan City lies on the east bank of the Atchafalaya River with Berwick on the west bank, with each having an elevation of 3 feet to 10 feet above sea level. The Atchafalaya is a major distributary of the Mississippi River through a connection at Old River near Simmesport, Louisiana. It also receives water from the Red River and Black River systems.

During flood stages on the Mississippi River the Atchafalaya Basin is designed, through a system of levees, control structures, and the like, to accept approximately one-half of the water from the Mississippi. The water travels down through the Atchafalaya Basin and passes into Atchafalaya Bay through two openings in the Teche Ridge, the Atchafalaya River at Morgan City

and the Wax Lake Cut just west of Patterson. The Wax Lake Cut was made to reduce flood stages in the Morgan City area. High water in the study area results from flood conditions on either the Mississippi or Red-Black systems as well as from storm surges associated with hurricanes. These cities are protected by a system of levees, however, water can flow around the ends of this system south of Morgan City and come up Bayou Chene into Bayou Boeuf and eventually proceed into Lake Palourde. Normally this backflow is not too much of a problem since the study area is protected by ring levees for the most part. However, during the record setting flood of 1973, backflow and locally heavy rainfall combined to produce a severe flood threat to the Morgan City area.

The city proper was not seriously flooded in 1973, but if a break in one of the critical levees had occurred, a mass evacuation would have been necessary. The offshore oil industry was very seriously affected by the flood since many of the port facilities were located between the levees and the river or bayous. The flood waters were near the top of the levees and many of the buildings and facilities were inundated to a depth of several feet or more. Also, navigational problems resulted due to the swift currents and associated erosion, siltation, and debris.

In general, the OCS activities have not contributed to the flooding problem in terms of any action that would effect water levels. The building of support facilities in flood-prone areas, such as on the batture, has increased the potential cost of a flood. However, most of this cost is borne by the companies owning the facilities.

OCS oriented interests have strongly supported a project to enlarge the channels in Bayou Chene, Black, and Boeuf and Atchafalaya Bay. This project would primarily benefit J. Ray McDermott Co. and Avondale Shipyards by allowing them to fabricate and repair larger equipment than can presently be moved through existing channels. Most of the impacts in the Morgan City area would be of an economic nature, however, the enlargement of the channel in the lower Atchafalaya River may well help reduce the heights of subsequent flood crests in the study area. This project is presently in limbo having appeared on President Carter's list of water projects to be halted. It remains to be seen whether or not the Congress will override the President and allow the completion of the project. More detailed information on the potential impacts may be obtained from the environmental impact statement prepared by the U.S. Army Engineer District in New Orleans.

Storm surges associated with hurricanes pose a flood threat to the study area. This threat appears not to be as serious as that of the Mississippi Basin at least on the basis of frequency. It also seems unlikely that as high a stage would be reached during a storm due to the short duration and the distance inland from the Gulf. During times when a hurricane appears imminent, the oil and gas industry moves equipment into the study area from more exposed locations. Smaller boats and equipment are taken through the Berwick Lock into the Teche for protection from high winds and water.

Fishing.

The oil and gas industry has had some impact on recreational activities in the study area. Most of this impact has been associated with inshore and onshore activities. In the OCS areas the various platforms serve as nagivation aids for fishermen and tend to attract fish because of the marine growth that soon develops on the submerged portions. Many believe that fishing is enhanced by these rigs much in the way that an artificial reef might enhance productivity. With a lessening of pollution due to stronger controls, regulations, and more frequent inspections it appears that additional sport fishing opportunities are provided by these rigs for the Morgan City area fishermen. It should be noted that definitive long range studies devoted to the effects of rigs and platforms on marine productivity are not available.

As indicated in other parts of this study, Morgan City, Berwick, and Patterson have been and continue to be significant ports for the commercial fishing industry. The primary species landed in the study area is shrimp. There is evident both a relative and an actual decline in fish landings in the study area (See employment figures). During the last forty years the tonnage and value of the catch has tended to increase for the state as a whole. The distribution of species landed has remained about the same with menhaden leading in tonnage and shrimp in value.

It appears that this decline in the importance of fisheries in the study area is unrelated to the oil and gas industry. There has definitely been competition for specific dock space, however, there is plenty of waterfront available and no shortage of docks overall. Shrimp boats still dock and unload on the Morgan City and Berwick waterfronts. Most, however, go into the Teche and dock at Patterson where there are large processing and marketing facilities available. Many of the support facilities for the oil and gas industry are likewise supportive of the fishing industry, especially shipbuilding and servicing companies. For example, it is easier to have a diesel engine replaced or repaired, get a new propeller, or get bearings and shafting in the Morgan City area than in most other small port cities due to the greater demand for this type of service.

The decline in fish landings in the study area appears to be part of a trend for dispersal of fish landing points along the Gulf Coast. In earlier days most boats had no refrigeration and relied heavily upon ports having an ice house(s). The study area had such facilities. Presently most of the boats have refrigeration or large quantities of ice can be obtained from easily available and relatively small, inexpensive machines as compared to the old fashioned "ice plants." Thus, the commercial fishing industry has become more market oriented. Also there are more port facilities with connecting roads available along the Gulf Coast than in the past.

In the initial days of offshore activities there were problems with debris in the vicinity of wells, pipe stubs projecting from the bottom, and uncovered pipelines. Shrimp trawls and other fishing gear were damaged and lost in these areas and much antagonism and controversy resulted. Today there are regulations and policies against the inordinate dumping

of debris. Well heads are cut off below the bottom when abandoned and pipelines are buried in the shallower parts of the OCS where trawling generally occurs. These policies and practices were made retroactive so that a cleanup of the problem areas resulted. Consequently, trawlers regularly operate in close proximity to offshore platforms and the earlier conflict has been largely laid to rest.

Land.

As the OCS-related industries grew, the demand for land became larger in the study area. This demand took the form of sites for fabricating yards and support facilities as well as an increased use of land by people attracted to the area. Much of the expansion from these uses occurred in the Morgan City-Amelia area. Land adjacent to Bayou Boeuf was used for agricultural purposes and it was primarily this land that was taken. As growth continued it became necessary to move into the swamps to accommodate the expansion. The choice was made to reclaim swamp even though agricultural land was available in the Bayou Vista-Patterson area. Some of this farmland may not have been for sale or the price may have been too high, however, it is believed that the traffic congestion over the single two-lane bridge into Morgan City was a significant negative factor to anyone considering commuting daily to Morgan City. Also, swampy areas on the waterfront were attractive for marine facilities.

To show the changes occurring before and after the major development associated with OCS activities, two land-use maps were constructed using aerial photographs purchased from the U.S. Army Corps of Engineers. The years 1947 and 1977 were chosen because the OCS-related development took place after 1947 (See inside back cover for maps). These maps show the changes through the use of three categories; farmland; industrial, residential, and urban; and marsh, swamp, and woodland. Three additional maps provide information of the growth of residential land, the water system, and the street system.

The demand for land by oil and gas related interests is not limited to siting; land is needed for access to support or processing facilities and for pipeline rights-of-way. Processing facilities associated with well head sites and pipelines are relatively few, generally consisting of compressor stations, separator systems, and in some cases storage facilities. In the OCS many separator stations and storage facilities as well as some compressors are placed on production or collector platforms. Therefore, the primary demand for land comes from the need for pipeline rights-of-way. In the past there had been a tendency to lay pipelines in the most direct line from one point to another avoiding where possible heavily populated areas where rights-of-way acquisition costs were high. With increasing land costs, spreading density of pipelines, and growing environmental concern, a resulting trend is to utilize corridors where the pipelines are grouped together.

In the case of Louisiana OCS activities, the expense and difficulties of laying lines offshore has resulted in collector systems in the fields

with a few relatively large lines coming ashore. The large lines, usually 8 to 16 inches for crude and 16 to 36 inches for gas, have generally been connected to the already existing onshore system of major pipelines.

The crude oil is generally piped and sometimes barged to processing facilities such as the refineries at Lake Charles, Baton Rouge, New Orleans, Norco, and elsewhere. None of the crude oil or product pipelines pass through the immediate study area although one such line (Texas Pipeline Co., 22" diameter) passes south of Morgan City.

There are two separate gas systems in Louisiana--the interstate system and the intrastate system. All of the OCS and much of the inshore and onshore gas goes initially into the interstate system. Several interstate lines pass immediately to the south of the study area. Two interstate lines cross U.S. 90 about one-half mile east of Bayou Ramos. Three interstate and two intrastate pipelines pass between Berwick and Patterson through a corridor. One small compressor facility is evident adjacent to U.S. 90. At the time of construction most of these pipelines were routed through either swamps or agricultural land. Presently a housing subdivision is being constructed on the Teche Ridge in the Bayou Vista area where the lines cross. As shown in one of the photographs, homes are being built in close proximity to the lines.

The land over the lines must be kept clear of large bushes and trees so that leaks can be detected and for purposes of quick access. Agricultural uses are generally not precluded and marshes and grassy areas can often be returned to a natural state or turned into a series of linear lakes, that if carefully planned and maintained can enhance the productivity of the marsh. The actual amount of land required for the right-of-way varies. The State of Louisiana has the following requirements for State lands:

PIPE DIAMETER (OUTSIDE)	RIGHT-OF-WAY	
	Width for construction	Permanent Width
2"-10"	50'	25'
11"-29"	100'	50'
30"-40"+	200'	60'

Where lines cross private lands the amount of right-of-way and the compensation is subject to negotiation between the landowner and company. If agreement cannot be reached a court case may result. As shown in the accompanying photograph, homes and other structures are often built very close to the pipelines. However, the State Fire Marshal takes into consideration the proximity of pipelines in evaluating the proposed locations of schools and other public buildings that involve the concentration of large numbers of people. Approval was recently denied by the fire marshal (not in the study area) for a proposed school site near an old high pressure gas line.

Soil shifts and changes are usually small and gradual enough not to threaten breakage or damage to pipelines. Streams or other waterway crossings often pose problems in that swift currents, erosion, and navigational activities may cause breakage or relocation problems. For example, one major obstacle to the deepening and widening of the Gulf Intracoastal Waterway is the problem of intersecting pipelines which must be dug up and modified. Controversy exists over who should bear this cost.

Environmental Impacts.

The determination and quantification of environmental impacts, including pollution, in the Morgan City area caused directly by OCS activities is difficult to ascertain in that most of these impacts are secondary and are attendant to the mass of people present in the area that are supported by the OCS activities. The OCS boundary at its nearest point is approximately 31 miles from Morgan City. Any spills or other types of pollution near this shoreward boundary would generally be carried westward by the prevailing current and even if pushed towards land by a strong south wind could not be expected to reach the vicinity of Morgan City due to the southward flow of water from the main channel of the Atchafalaya River. The U.S. Geological Survey compiles data connected with accidents and spills in the OCS areas and makes it available through its Conservation Division.

The proposed enlargement of Bayou's Boeuf, Black, and Chene is directly related to the support of OCS activity. However, virtually all of the direct environmental impacts associated with this project would occur outside of the study area. For a detailed description of these impacts, the reader is directed to the environmental impact statement prepared by the Corps of Engineers.

Most of the oil and gas from the OCS travels by pipeline from the fields to the onshore system. OCS gas goes into the interstate system and is regulated by the Federal Government. This interstate system receives gas from numerous inshore and onshore fields as well, so that once an OCS line reaches a junction point inshore or onshore, the point of origin of a specific flow of gas becomes in many cases difficult or impossible to determine.

In the case of crude the system is not quite as complex, however, similar conditions make it difficult to determine the source of crude passing through onshore lines at any given time. Should a break occur in one of these lines near Morgan City, there might or might not be OCS crude or gas in the line at that particular time.

Initially most crude was barged in from the platforms. As the number and extent of the fields became evident, pipeline systems were developed. Presently, crude is barged when a pipeline is shut down for repair and from small isolated fields where low production and distance make it uneconomical to construct a line. Barging may become more prevalent in the future due to greater than expected breakage and corrosion problems in the existing undersea lines. The difficulties with constructing and

maintaining pipelines in waters 500 or more feet in depth may result in additional barging as production moves towards deeper water, especially if the fields prove to be on the small side. The crude is generally hauled by the shortest route to a refinery near the coast and very few of the barges would thus pass through the study area.

The numerous boats, helicopters, and business firms operating out of the study area generally are active onshore, inshore, and in the OCS. For example, should a small spill of diesel oil occur during the fueling of a supply vessel, it would be wrong to attribute this accident directly to OCS activities if the vessel stopped on the way out or back at an inshore field. Actually, very few accidents--even minor--have occurred, and the study area has been relatively free of pollution directly associated with the OCS sector of the oil and gas industry.

FOOTNOTES

[1]U.S. Department of Commerce (NOAA) Climatography of the United States, #81, 1973 and #20, 1975.

[2]_____ (Weather Bureau) Climatography of the United States, #60-16, 1959.

[3]U.S. Army (Corps of Engineers), History of Hurricane Occurrences Along Coastal Louisiana, 1972.

[4]Ibid.

[5]U.S. Army (Corps of Engineers), Water Resources Development in Louisiana, 1975, Vicksburg, 1975.

[6]U.S. Department of Agriculture, "Soil Survey of St. Mary Parish, La.," Soil Survey Series, 1952, #3, (in cooperation with La. Agricultural Exp. Station), p. 4.

[7]Ibid.

THE ROLE OF OCS ACTIVITY IN THE ECONOMIC GROWTH OF MORGAN CITY, LOUISIANA

D.P. Manuel

THE ROLE OF OCS ACTIVITY IN THE ECONOMIC GROWTH OF MORGAN CITY, LOUISIANA

Introduction.

The purpose of this portion of the Morgan City impact study is to trace the economic development of Morgan City and, particularly, the role of Outer Continental Shelf oil and gas activities in the local economy. Prior to 1950, there were little data published solely for Morgan City. Most usable data were collected on the geographical basis of the county, St. Mary Parish. However, an examination of such county-wide data gives an approximate view of the city's early development.

After the 1950 census year, comparable data for Morgan City were collected and are compared to the succeeding census years as well as to the data for St. Mary Parish, Louisiana, and the United States.

It is interesting to note that the only reliable economic datum for St. Mary in the 1930 census is employment by industry. Expansions in data-collection occur in the 1940 census, but only in minor areas of importance. The 1920 census provided no meaningful economic data for the parish.

In general, this economic impact study is a descriptive study of Morgan City, attempting to illustrate some of the classic underlying relationships of economic development. To aid in the examination of Morgan City and St. Mary Parish's growth and economic development, shift-share analysis is employed. This technique allows the researcher to isolate the components of employment growth by industry using decadal data.

The analysis becomes more comprehensive with the use of data from the 1950 census. Data collection procedures improved and, of course, offshore development began. Excellent data on well completions and production allow for a fairly complete analysis. Unfortunately, only in the 1967 and 1972 Census of Mineral Industries were offshore activities separated from total Louisiana oil and gas activities. Hopefully, the Bureau of the Census will continue this practice to aid researchers in future studies of OCS development.

Structure of Employment - Pre OCS: 1930-1940

As characterized throughout most of the United States and Louisiana, agriculture was exceedingly important as an employment source. While the industrial development of the United States had taken hold in the urban centers, it had yet to spill over into the rural areas. Most of the South, as a unit, remained highly agrarian in nature until the late 1940's.

In 1930, 21.5 per cent of the United States' labor force was employed in agriculture. The Louisiana and St. Mary Parish employment in agriculture in the same year was 36.4 per cent.[1] As did most of the South, Louisiana shed its agrarian background very slowly due to its highly fertile soil and relatively unskilled population.

St. Mary Parish, besides having sugar cane-oriented economic structure, had an extensive forestry and fishing sector. The forests of the Atchafalaya Basin yielded millions of board feet of cypress, oak, and gum, while its proximity to open waters fostered an extensive fishing industry. More than 4.0 per cent of St. Mary's employment was in forestry and fishing, compared to 1.7 per cent for Louisiana and 0.5 per cent in the entire United States. The location of Morgan City, as pointed out elsewhere, was a prime factor in this fishing sector. Additionally, the discovery in later years of offshore oil and gas made industrial location a relatively easy task.

Forestry activities led to a rather large lumber and wood products industry relative to that in Louisiana and the United States. In 1930, 765 persons were employed in St. Mary Parish in saw and planing mills, wood-working, and furniture-making. This represented 7.5 per cent of total parish employment compared to 3.9 per cent in Louisiana and 1.8 per cent in the United States.[2] The wide use of cypress in Louisiana and elsewhere in the 1920's and 1930's would help to account for this high proportion of wood-related employment in St. Mary Parish. While Morgan City was not a vibrant part of the agriculture setting in St. Mary Parish, the proximity to forests and water resulted in a forestry and fishing type of economy.

In 1930, only 44 persons in St. Mary Parish were reported as being employed in the oil and gas industry. These 44 represented 0.4 per cent of total employment, compared to 0.9 per cent of Louisiana employment. Salt mining has, of course, been located in the parish for many years, yet only 0.5 per cent of St. Mary's employment was so allocated.

The construction industry, long a major part of the United States economy and of vital importance to capital-building, was a late-comer to Louisiana. In 1930, 5.2 per cent of United States employment was in the construction sector; Louisiana had 3.3 per cent in construction employment while St. Mary Parish had only 2.6 per cent.[3] It will be shown later how this industry responded to the economic growth in Morgan City after 1950.

An agriculture orientation was still very prominent in the United States in the 1930's. However, the rise of the manufacturing was beginning in earnest in most areas of the country. Overall, 12.3 per cent of the nation's employment was in manufacturing, compared to 5.8 per cent in Louisiana and 7.4 per cent in St. Mary Parish.

Most of the St. Mary Parish employment in manufacturing was in the area of food and kindred products--4.6 per cent. Sugar cane refining and seafood preparation probably constituted a majority of such employment. Similar employment in Louisiana and the United States was only 1.9 per cent of their respective totals.[4]

The chemical industry, still a minor part of overall manufacturing, employed 1.3 per cent of total United States employment, 1.6 per cent of Louisiana's employed, and 0.1 per cent of St. Mary Parish laborers.[5] The growth of this industry in Louisiana was concentrated along the Mississippi River, between Baton Rouge and New Orleans, and in the Lake Charles region.

While Morgan City and St. Mary Parish would later develop as a leading area in the energy industry, petrochemicals were never to develop as they did along the Mississippi River. Morgan City's inability to accommodate deep-draught vessels was apparently a contributing factor to the underdevelopment of this particular industry.

Textile manufacturing, of course, would not appear in the South until the 1950's and has unfortunately never made a strong showing in Louisiana's industrial structure. Distance from steel manufacturing centers has similarly kept automobile assembly and manufacturing away from the southern part of the nation. Approximately 6.0 per cent of total United States' employment was in the iron and steel sector. For the purpose of the 1930 census, fabrication products were included in this sector. It is suspected that such fabrication facilities comprised most of the 1.3 per cent industry employment in Louisiana and the 1.2 per cent in St. Mary Parish.[6]

Most of the United States' employment in manufacturing in 1930 was concentrated in the iron and steel sector. Louisiana and St. Mary Parish, on the other hand, had the greatest concentration in the "other" category of independent hand trades, construction and maintenance of streets, and other manufacturing. Slightly more than 5.0 per cent of Louisiana employment and 4.4 per cent of employment in St. Mary Parish were so engaged. This degree of employment concentration in both Louisiana and St. Mary Parish is an excellent indication of the level of development of these areas. They were certainly a long way from developing industrially at the same pace as the United States. Such "hand trades" and light manufacturing were, however, an absolute prerequisite for future development.[7]

Another prerequisite for the growth and development of an economy is its transportation and communication sector. This broad definition in the 1930 employment data by industry included garages, greasing stations, steam and street railroads, postal service, telephone and telegraph, and other transportations.[8] A reasonable assumption would be that St. Mary Parish's employment in this industry was composed primarily of workers on railroads, boating and boat-related sectors, and motor vehicle repair services. Almost 7.0 per cent of the parish's employment was so engaged. However, both Louisiana and the United States registered 8.2 per cent of total employment in this industry. The lower employment ratio in St. Mary Parish is indicative of its lower level of development when compared to the employment in Louisiana and the United States.

Similar indications surface when examining the finance, insurance, and real estate sector. The United States had 2.9 per cent of its total employment in this sector by 1930; Louisiana, 1.8 per cent; and St. Mary Parish, 1.2 per cent. Over the following 30 years, this sector, a tertiary one in nature, would increase dramatically.[9]

The growth of the wholesale and retail trade sector in the United States is familiar to most. In 1930, the United States' employment in this industry was 12.5 per cent of its total, whereas Louisiana's employment was 10.3 per cent and St. Mary Parish's employment was only 7.3 per cent.

TABLE 1

DISTRIBUTION OF EMPLOYMENT (%)
1930

	U.S.	LA.	St. Mary
Agriculture	21.5	36.4	36.4
Forestry & Fishing	.5	1.7	4.4
Oil & Gas Wells	.4	.9	.4
Other Mining	2.0	.2	.5
Construction	5.2	3.3	2.6
Chemicals &Allied	1.3	1.6	.1
Textiles Manufacturing	1.6	.3	.2
Food & Kindred Products	1.9	1.9	4.6
Auto Factories & Repair Shops	1.8	.7	.4
Iron & Steel	5.7	1.3	1.2
Lumber & Wood Products[1]	1.8	3.9	7.5
Printing & Publishing	1.6	1.0	.2
Other Manufacturing[2]	3.2	5.2	4.4
Transportation & Communication[3]	8.2	8.2	6.8
Fire[4]	2.9	1.8	1.2
Wholesale & Retail	12.5	10.3	7.3
P.A.	.2	1.6	.6
Services[5]	16.9	17.5	17.6

[1] Includes saw & planing mills, other woodworking and furniture.
[2] Includes independent hand trades, other manufacturing industries, construction and maintenance of streets.
[3] Includes garages, greasing stations, postal service, steam and street railroads, telephone & telegraph, other transportation.
[4] Finance, insurance, and real estate.
[5] Includes recreation and amusement, other professionals, hotels, restaurants, boarding houses, laundries, domestic and personal service.

Source: U.S. Department of Commerce, U.S. Bureau of the Census, 1930.

Like finance, insurance, and real estate, this sector too would illustrate large gains in employment as St. Mary Parish and Morgan City progressed.

Surprisingly, very little difference was illustrated by the employment in the service sector. Included in this industry category was recreation and amusement, hotels, restaurants, boarding houses, laundries, personal services, and professionals. As a per cent of total employment, St. Mary Parish registered 17.6 per cent in this category in 1930; Louisiana had 17.5 per cent; and the United States had 16.9 per cent.[10] Perhaps because of lower levels of educational attainment, Louisiana and St. Mary Parish had a disproportionately high percentage of workers in this industry as

late as 1960, due to the inclusion of household and personal service workers in the category. For many years after 1930, this was one of the only sectors open to female employment, particularly nonwhite females.

The structure of employment in the United States had changed dramatically by 1940. Changes in Louisiana and St. Mary Parish were even more surprising, particularly since onshore mining of oil and gas was stepped up during the preceding decade.

In all three geographical areas, there was a decline in agriculture's share of total employment. Total United States agriculture employment declined to 18.5 per cent of total employment and that in Louisiana declined to 25.1 per cent from 36.4 per cent in 1930.[11] Agricultural employment in St. Mary Parish did not decline as severely, from 36.4 per cent in 1930 to 33.8 per cent in 1940. It is particularly interesting that most of this agricultural employment of St. Mary Parish in 1940 was outside of Morgan City. More than 30 per cent of the workers in St. Mary Parish listed their occupation in 1940 as being "farmer, farm manager, farm foreman, or farm laborer". However, only 0.4 per cent of Morgan City's workers were so listed.

Forestry and fisheries declined slightly in importance in Louisiana and the United States. In Louisiana, 1.3 per cent of total employment was in this industry and less than 0.5 per cent were so employed in the entire United States. In St. Mary Parish, however, this industry gained in employment to account for 5.3 per cent of the parish's total employment.[12] Once again, the proximity to open waters led to a natural increase in this industry. The overall slow growth of Louisiana would also help to account for this increase in forestry and fishing. Natural resource supplies were readily available and demand for these products was increasing annually.

The rise of oil and gas exploration in Louisiana and Texas in the 1930's led to major developments in employment. Employment in the mining sector in the United States declined to 2.0 per cent of total employment. Oil and gas well employment remained at 0.4 per cent of the total. In Louisiana, however, oil and natural gas production employment increased to 2.7 per cent of total employment, an increase of 78 per cent more persons employed in the industry over the 1930 level.

In St. Mary Parish, total employment in oil and natural gas production rose to 418 in 1940, an 850 per cent increase. As a per cent of total employment, these persons accounted for 4.2 per cent, a significant gain from 0.4 per cent so employed in 1930.[13] One must remember that the oil and gas production of this decade was totally onshore and greater gains in employment were yet to come during the 1950's.

The construction industry was also beginning to exert itself in Louisiana by the latter half of the 1930's. In 1940, 5.4 per cent of Louisiana's employment was in the construction sector, compared to 3.3 per cent in 1930. St. Mary Parish had 6.5 per cent of its workers in this industry, while the United States employed 4.6 per cent of its workers

TABLE 2

DISTRIBUTION OF EMPLOYMENT BY INDUSTRY, 1940

Industry	U.S.	LA.	St. Mary
Agriculture	18.9	32.5	33.8
Forestry and Fisheries	.2	1.0	5.3
Mining	2.0	1.9	4.2
Contract construction	4.7	4.6	6.5
Food and Kindred Products mfg.	2.5	2.7	9.4
Textile Mill mfg.	2.6	.4	0
Apparrel mfg.	1.8	.5	0
Lumber, wood products, furn. mfg.	2.1	3.9	4.4
Printing and Publishing mfg.	1.4	.6	.3
Chemicals & allied products mfg.	1.0	.8	.1
Electrical & other machinery mfg.	2.4	.3	.2
Motor vehicles & equip. mfg.	1.3	.1	0
Other transp. equip. mfg.	.7	.3	.8
Other and miscellaneous mfg.	8.0	3.5	.5
Railroads & railway express	2.5	1.9	1.2
Trucking and warehousing	1.1	1.0	.6
Other transportation	1.2	2.2	1.6
Communications	.9	.6	.3
Utilities & sanitary services	1.2	.9	.3
Wholesale trade	2.7	2.4	.9
Food & dairy products stores	3.3	3.2	3.5
Eating & drinking places	2.6	2.4	2.5
Other retail trade	8.4	6.7	4.2
Finance, insurances & real estate	3.3	2.0	.8
Hotels & other personal services	3.8	3.4	2.4
Private households	5.3	9.0	7.6
Business and repair services	1.9	1.5	1.3
Entertainment, recreation services	.9	.8	.6
Medical, other professional services	7.4	6.1	3.4
Public administration	3.3	2.6	1.6
Armed services	.7	.4	0
Industry not reported	1.5	1.0	1.6

Source: U.S. Department of Commerce, Office of Business Economics, Growth Patterns in Employment by County, 1940-1950 and 1950-1960, v. 5, Southeast, (Washington: USGPO, 1965).

in construction.[14] Of course, it would not be until after World War II that construction would become a vibrant part of Louisiana's economy.

Manufacturing industries have been late-comers to Louisiana. In 1940, 23.4 per cent of total employment in the United States was in manufacturing, compared to 14.7 per cent in Louisiana and 15.8 per cent in St. Mary Parish. Iron and steel mills, and machinery products comprised the largest portions of the nation's employment in manufacturing. Food and kindred products were 3.3 per cent of Louisiana's total employment. The difference between St. Mary Parish and Louisiana was comprised of employment in food and kindreds, and, sawmills and planing mills. More than 9.0 per cent of St. Mary's total work force were employed in the former while 3.9 per cent were working, in 1940, in the latter.[15] As stated earlier, the comparative advantage of St. Mary Parish in food production, primarily sugar cane and fisheries, and forestry harvesting, lent itself to relatively high levels of employment in these industries. Interestingly, even before the advent of offshore petroleum and gas activities, employment in the lumber and wood products, sawmills, etc., began to decline; e.g., 7.5 per cent in 1930 and 3.9 per cent in 1940. This development may be attributed to a somewhat higher level of mechanization in the industry and the gradual depletion of virgin cypress stands.

Apparently due to the Great Depression, the transportation and communication industry suffered severe setbacks and had not rebounded by 1940. Almost 7.0 per cent of total United States employment was in this sector in 1940, down from 8.2 per cent in 1930. Similarly, Louisiana's employment in this industry declined to 7.8 per cent of the total workers.[16] In St. Mary, a proportional drop to 4.0 per cent employment in transportation and communication was experienced. Existing knowledge provides no other explanation of this occurrence. As will be demonstrated later, "other transportation" in St. Mary Parish becomes an important contributor to total employment as OCS development progresses.

As the economy began to accumulate wealth and adjust to its renewed affluence after the Depression, wholesale and retail trade employment increased. Almost 17 per cent of total United States employment in 1940 was in the wholesale and retail sector, a total of 7.5 million persons. A greater per cent of women were so employed than men, 18.2 per cent of women compared to 16.2 per cent of men.[17] In Louisiana, 19.1 per cent of the labor force was in this sector. The disparity between men and women, however, was greater. More than 28 per cent of women were in wholesale and retail trade compared to 17 per cent of men. Only 11.1 per cent of St. Mary's employment was so allocated, with only 2.8 per cent more women than men working at the wholesale and retail level in 1940.

According to the 1940 census, the service sector's employment in St. Mary Parish declined to 13.9 per cent of total employment. If anything caused this, it would be the shift in employment toward more high-paying, more highly-skilled jobs. Louisiana also experienced a decline in this sector to 13.2 per cent of its total employment.[18]

TABLE 3

EMPLOYMENT BY INDUSTRY,
1940

Industry	U.S.	LA.	St. Mary
Agriculture	8,568,455	251,060	3,500
Forestry and Fisheries	110,425	7,550	547
Mining	928,167	14,950	437
Contract construction	2,110,376	35,422	673
Food and Kindred Products mfg.	1,122,231	20,979	967
Textile Mill mfg.	1,165,794	2,797	2
Apparrel mfg.	814,449	3,824	5
Lumber, wood products, furn. mfg.	951,426	29,725	458
Printing and Publishing mfg.	642,386	4,759	27
Chemicals & allied products mfg.	446,452	6,345	14
Electrical & other machinery mfg.	1,086,961	2,267	21
Motor vehicles & equip. mfg.	581,214	504	0
Other transp. equip. mfg.	311,470	2,082	80
Other and miscellaneous mfg.	3,617,211	26,619	56
Railroads & railway express	1,150,166	14,613	128
Trucking and warehousing	512,694	7,440	59
Other transportation	550,142	17,079	169
Communications	379,340	5,050	34
Utilities & sanitary services	551,477	6,821	35
Wholesale trade	1,223,542	18,811	93
Food & dairy products stores	1,488,608	24,345	366
Eating & drinking places	1,170,094	18,607	259
Other retail trade	3,799,767	51,989	444
Finance, insurances & real estate	1,487,934	15,093	81
Hotels & other personal services	1,728,979	26,177	247
Private households	2,388,481	69,093	794
Business and repair services	881,029	11,288	134
Entertainment, recreation services	405,943	6,048	65
Medical, other professional services	3,378,134	46,792	362
Public administration	1,496,967	19,813	168
Armed services	305,501	3,200	0
Industry not reported	690,540	7,746	159
TOTAL	45,375,815	771,142	10,224

Source: Regional Employment by Industry, 1940-1970. U.S. Department of Commerce, Social and Economic Statistics Administration, Bureau of Economic Analysis, Washington: U.S. Government Printing Office, 1972.

Occupational Structure - 1940.

The occupational structure of the United States has, of course, changed dramatically in the last 37 years. Along with the preceding description of employment by industries, it will be helpful here to discuss the 1940 structure of occupations in St. Mary Parish. Such a discussion should shed additional light on the character of Morgan City prior to the onslaught of OCS oil and gas discoveries.

A majority of persons employed in the United States in 1940 were operatives, working with machines and vehicles. Slightly over 18 per cent of the men were in this occupation and approximately two million women, or 18.4 per cent of employed women, were similarly employed. Fourteen per cent of Louisiana males in 1940 were operatives while 11.2 per cent of the women were in the same occupation. Interestingly, 21.3 per cent of the men in Morgan City were operatives compared to 13.3 per cent of the total males in St. Mary Parish.[19] A relatively high proportion (15.7) of employed females in Morgan City were also operatives. This latter group numbered 82 out of 520 employed females.

TABLE 4

PER CENT DISTRIBUTION OF EMPLOYED WORKERS
BY OCCUPATION, 1940

	United States	LA.	St. Mary Parish	Morgan City
Professional Workers	6.4	7.0	3.5	5.2
Semiprofessional Workers	1.0	1.0	.6	1.6
Farmers and Farm Managers	11.4	16.9	3.7	.1
Proprietors, Managers, except farm	8.3	10.1	6.3	9.6
Clerical, Sales and Kindred Workers	16.6	18.3	6.2	9.4
Craftsmen, Foremen, & Kindred Workers	11.2	10.5	7.6	8.9
Operatives and Kindred Workers	18.3	13.4	12.3	20.1
Domestic Service Workers	4.7	1.0	7.2	7.9
Service Workers except domestic	7.7	6.5	4.7	8.4
Farm Laborers (wage workers) and farm foremen	4.3	3.9	26.8	.3
Farm Laborers, Unpaid family Workers	2.6	3.7	1.4	-
Laborers, except farm	6.8	7.1	18.4	25.3
Occupation not reported	.8	.6	1.3	3.1

Source: U.S. Bureau of the Census, 1940.

By 1940, the farm population of the United States was declining at a fairly quick pace. There were, however, a significant number of individuals in Louisiana who were still considered farmers and farm laborers. Eleven

and one-half per cent of those employed in the United States were farmers or farm managers. A majority of these were, of course, males. In Louisiana, almost 17 per cent of the labor force was listed in this occupation and 20.3 per cent of all working males were farmers or farm managers. St. Mary Parish listed 3.7 per cent of its working population as farmers while Morgan City had only 0.1 per cent so categorized.[20]

A similar occupation illustrating the agricultural background of pre-World War II United States was farm laborers and foremen. Slightly more than 0.5 per cent of the United States' working males were farm laborers and foremen, whereas 4.8 per cent of such males in Louisiana had the same occupation. On the other hand, St. Mary Parish had a unduly high proportion of males employed as farm laborers and foremen--29.2 per cent. Only 0.3 per cent of Morgan City males were likewise employed. The high proportion of farm laborers in St. Mary Parish was likely due to the existence of large sugar cane plantations, necessitating much hand-cutting of the crop and hand-planting.

Morgan City and St. Mary Parish in 1940 had much higher concentrations of laborers, other than farm, than did both Louisiana and the United States. This was probably due to the sugar processing plants, sawmills, planing mills, and fishing industries. Almost 600 persons in Morgan City were employed as laborers, 25 per cent of its work force. In St. Mary Parish, the proportion was 18.4 per cent or 1,885 persons.[21] Although this may be a tentative conclusion, the high prevalence of laborers not associated with farming may lead one to infer that the labor force was basically unskilled.

Closely tied with those individuals in the occupations of operatives would be those listed as craftsmen, foremen, and kindred workers. On a somewhat higher plane, these workers were more specialized in specific tasks and are still considered more specialized today. More than 14 per cent of all males working in the United States in 1940 were considered craftsmen or foremen. These men numbered only 4.0 per cent fewer than those in the "operatives" category. In Louisiana, 12.8 per cent were craftsmen and foremen, indicating again a slightly lower skill level. St. Mary Parish, however, had only 9.3 of its males in this occupation, whereas, Morgan City registered 11.5 per cent as craftsmen and foremen. This should not be surprising since most craftsmen and foremen will congregate in towns and cities, where the demand for their skills is highest.

Proprietors and managers, the occupations of the reknown American entrepreneur, have always been a mainstay of communities in the United States. Relative to other occupations, these numbered comparatively few, 8.3 per cent of total American workers in 1940. In Louisiana, however, slightly more than 10 per cent of the workers were proprietors and managers, concentrated mainly in the urban areas. There was a greater proportion of females in Louisiana who performed these duties than in the entire United States. The same occupations in St. Mary Parish registered only 6.3 per cent of total workers. As expected, Morgan City's proprietors and managers were a greater part of its work force, 9.6 per cent.[22] As stated earlier, this is characteristic of the towns and cities within county lines.

Closely aligned with those individuals in proprietorship or managerial positions are those employed as clerical and sales workers. Comparative trends of these occupations in the United States, as well as the relevant geographical subdivisions of this paper, follow very closely with employment in retail and wholesale trade. They, after all, complement one another. More than 16 per cent of total United States employment in 1940 was in the occupations of clerical and sales workers. Almost 50 per cent of these 7.5 million workers were women. In Louisiana, 37.9 of employed females were clerical and sales workers.

In St. Mary Parish, however, only 6.2 per cent of employment was in sales and clerical work. Five per cent of the males held these occupations and 12.2 per cent of the females were so listed.[23] The concentration in these occupations in Morgan City as of 1940 was greater than St. Mary Parish, but not as great as in Louisiana or the nation. Seven and one-half per cent of male occupations was in sales and clerical category and 16 per cent of the females were similarly listed. Very dramatic changes occur over the following two decades as Morgan City develops.

Much of the change that occurred was in the service sector. As the nation progressed, employment took on new dimensions and the South was not immune from the changes. Thirty per cent of employed females in 1940 were in occupations connected with service sectors, either household or other service. In Louisiana, 17 per cent were in service-connected occupations. The smaller proportion in Louisiana may be attributed to the greater proportion of Louisiana females in clerical occupations than the United States' female totals.

St. Mary Parish and Morgan City had even higher ratios of women in service occupations than did the United States. Forty-three per cent of females in St. Mary Parish were in these service occupations, most of them as domestic service workers, while 57 per cent of the Morgan City females were in service-oriented occupations.

The Start of Offshore Activities: 1950.

Economic growth in the United States experienced a dramatic upsurge after World War II. Much of the increase in output and income was directly caused by the pent-up demand for goods and services released after the war. Many of the trends in employment continued after the war; however, new patterns emerged that were to set the stage for more intensive growth in the American economy.

The most obvious trend to continue was the continued decrease in agricultural employment. In 1950, only 12.3 per cent of the country's employed were in agriculture, a rather significant decline from the 1940 ratio of almost 19 per cent.[24] Employment in Louisiana's agriculture sector declined by 97,000 persons over the decade of the 1940's, to 154,558. As a per cent of total employed, the ratio fell to 17.4 per cent from 32.5 per cent in 1940.[25] St. Mary Parish experienced a similar decline in farm-oriented employment. In 1940, 33.8 per cent of total employment was in

TABLE 5

EMPLOYMENT BY INDUSTRY, 1950

Industry	U.S.	LA.	St. Mary
Agriculture	7,066,199	154,558	2,086
Forestry and Fisheries	128,311	9,252	809
Mining	941,308	24,556	1,112
Contract construction	3,524,414	66,197	871
Food and Kindred Products mfg.	1,434,060	26,167	916
Textile Mill mfg.	1,254,236	2,029	5
Apparrel mfg.	1,079,252	5,013	0
Lumber, wood products, furn. mfg.	1,207,477	30,999	373
Printing and Publishing mfg.	867,308	6,577	50
Chemicals & allied products mfg.	667,756	11,292	51
Electrical & other machinery mfg.	2,109,054	3,728	45
Motor vehicles & equip. mfg.	879,755	462	0
Other transp. equip. mfg.	488,116	4,284	157
Other and miscellaneous mfg.	4,798,691	43,452	91
Railroads & railway express	1,404,555	18,545	150
Trucking and warehousing	711,561	8,492	44
Other transportation	874,046	27,722	347
Communications	718,251	9,311	68
Utilities & sanitary services	794,874	13,495	78
Wholesale trade	2,003,991	32,212	171
Food & dairy products stores	1,760,834	30,617	471
Eating & drinking places	1,710,285	29,547	384
Other retail trade	5,267,809	79,893	784
Finance, insurances & real estate	1,941,355	22,158	112
Hotels & other personal services	1,903,701	28,979	255
Private households	1,677,056	50,592	683
Business and repair services	1,333,548	19,145	141
Entertainment, recreation services	505,430	8,405	98
Medical, other professional services	4,862,384	74,247	562
Public administration	2,533,752	33,682	238
Armed services	1,025,502	10,824	5
Industry not reported	842,520	13,253	108
TOTAL	57,474,871	886,432	11,155

Source: Regional Employment by Industry, 1940-1970. U.S. Department of Commerce Social and Economic Statistics Administration, Bureau of Economic Analysis, Washington: U.S. Government Printing Office, 1972.

agriculture. By 1950, 2,086 individuals were in agriculture, or 18.5 per cent of total employment. Louisiana and St. Mary Parish followed the national trends in agricultural employment, however, they did so at a lagged pace. Given the climate and availability of fertile farmland, this lagged performance is not surprising.

While both the United States and Louisiana increased the employment in forestry and fisheries, they did so at such a marginal pace that employment in this industry as a per cent of total employment remained at the 1940 ratios. St. Mary Parish, however, raised its concentration of employment in forestry and fishing from 5.3 per cent in 1940 to 7.2 per cent in 1950. More interesting perhaps is the fact that between 1940 and 1950, employment in forestry and fisheries in St. Mary Parish increased 48 per cent, indicative of the industry's growth during the decade.[26] Much of this increase in employment can be attributed to the increased population after World War II and the resultant demand for food and housing.

Extensive growth of industry, private demand for automobiles, and new product technologies led to a broad expansion of the mining industrial base in post-World War II United States. Total employment increased only 1.4 per cent in the United States' mining sector. The fast growth of total employment in the nation caused the ratio of those employed in mining to decline from 2.0 per cent in 1940 to 1.6 per cent in 1950.[27]

Louisiana, as did Texas and Oklahoma, experienced a different effect in the mining industries. In the state, mining-related employment as a per cent of total employment rose to 2.7 per cent of total employment, to 24,556. This gain represented an increase of 64.2 per cent. St. Mary Parish shared in the increase in mining employment. As a per cent of total parish employment, mining-related employment was 9.9 per cent in 1950, significantly higher than the 4.2 per cent registered in 1940. The gain in the ratio represented a 154 per cent increase in absolute numbers.[28]

Some of the mining employment in St. Mary Parish was associated with salt and sulpher mining, but these represented only a small portion of the total. Most of this mining employment was directly related to petroleum and natural gas extraction. More than 81 per cent of total well completions in Louisiana in 1950 were in the southern half of the state.[29] The 19 offshore wells completed in 1950 were within sight of the inland waters, so it seems safe to say that OCS development had little impact as of 1950. Over 50 per cent of the parish's mining employment was in Morgan City. This may be indicative of the early stages of offshore oil's development in 1950.

Prior to 1954, 54.8 million barrels of crude oil and condensate oils were produced from the offshore regions of Louisiana. Of these 54.8 million barrels, only 2.0 per cent originated in the presently known OCS regions.[30] Natural gas and casinghead gas produced from the offshore areas totaled 91.7 billion cubic feet of which 22 per cent was produced from OCS lands.[31]

TABLE 6

DISTRIBUTION OF EMPLOYMENT BY INDUSTRY, 1950

Industry	U.S.	LA.	St. Mary
Agriculture	12.3	17.4	18.5
Forestry and Fisheries	.2	1.0	7.2
Mining	1.6	2.7	9.9
Contract construction	6.1	7.5	7.7
Food and Kindred Products mfg.	2.5	3.0	8.1
Textile Mill mfg.	2.2	.2	0
Apparrel mfg.	1.9	.6	0
Lumber, wood products, furn. mfg.	2.1	3.5	3.3
Printing and Publishing mfg.	1.5	.7	.4
Chemicals & allied products mfg.	1.2	1.3	.4
Electrical & other machinery mfg.	3.7	.4	.4
Motor vehicles & equip. mfg.	1.5	0	0
Other transp. equip. mfg.	.8	.5	1.4
Other and miscellaneous mfg.	8.3	4.9	.8
Railroads & railway express	2.4	2.1	1.3
Trucking and warehousing	1.2	1.0	.4
Other transportation	1.5	3.1	3.1
Communications	1.2	1.1	.6
Utilities & sanitary services	1.4	1.5	.7
Wholesale trade	3.5	3.7	1.5
Food & dairy products stores	3.1	3.5	4.2
Eating & drinking places	3.0	3.3	3.4
Other retail trade	9.2	9.0	6.9
Finance, insurances & real estate	3.4	2.5	1.0
Hotels & other personal services	3.3	3.3	2.3
Private households	2.9	5.7	6.0
Business and repair services	2.3	2.2	1.3
Entertainment, recreation services	.9	.9	.9
Medical, other professional services	8.5	8.4	5.0
Public administration	4.4	3.8	2.1
Armed services	1.8	1.2	0
Industry not reported	1.5	1.5	1.0

Source: Table 5.

Effective buying income in St. Mary Parish increased from $18.5 million dollars in 1947 to $40 million in 1954, a 116 per cent increase.[32] During the same period, the increase in mining's payrolls is somewhat revealing. In the first quarter of 1953, 592 persons were listed as being employed in the mining sector. Total payrolls for that sector in March, 1953, were $738,000.[33] An inland parish in which there was considerable mining activity was St. Landry Parish. In the first quarter of 1953, 809 persons were employed in this parish's mining sector, yet mining payrolls totaled only $684,000.[34] One explanation of the difference may be that St. Mary Parish had a greater concentration of persons in non-fuel mining (salt, gravel, sulphur). However, the initiation of offshore activities may be an equally plausible explanation.

A well known pattern in United States economic history is the increase in construction activity after World War II.[35] In 1950, 6.1 per cent of employed persons were engaged in construction. In Louisiana, 7.5 per cent were in contract construction and St. Mary Parish had 7.7 per cent. Approximately 300 of the 871 persons employed in construction in St. Mary Parish were in Morgan City. Since Morgan City was not the county seat of government, its construction activity was somewhat lower than Franklin, a medium-sized residential and trade area in 1950.

Development and growth in the United States had reached a point in 1950 where manufacturing employment was one-fourth of total employment. This ratio to total employment increased only two percentage points, a seemingly small change; however, total manufacturing workers increased to 14.5 million, the largest of all industrial employment categories. Other than the miscellaneous category's 8.3 per cent of total employment, electrical and machinery manufacturing comprised 3.7 per cent of total employment.[36]

In Louisiana, 0.5 per cent of total employment was in electrical and machinery manufacturing in 1950. Total manufacturing accounted for 16.1 per cent of the state's employment, an increase from 13.1 per cent in 1940. Lumber and wood products employed 31,000 individuals in 1950 in Louisiana, 3.5 per cent of total employment.[37] This industry involved mostly pulp mills, paper mills, veneer manufacturing, and sawmills. In St. Mary Parish, 3.3 per cent of its employment was in lumber and wood products. In 1940, St. Mary had 4.4 per cent of the workers in this industry. This parish's decline in workers represented 100 fewer individuals in the lumber industry.[38]

Growth of the fishing industry was illustrated quite well when examining the food and kindred products sector. In 1940, 916 persons were employed in the food industry or 9.4 per cent of total employment. By 1950, 916 workers were in St. Mary Parish's foods sector, a decline to 8.1 per cent of total workers. The industry's growth was accompanied by more mechanization, and beginning in 1950, one sees the seeds of the industry's loss of workers. Higher paying positions in other sectors, namely mining, construction, and manufacturing, drew workers out of fishing and food processing.[39]

By 1950, employment in the nation's transportation and communication industries had increased to 8.0 per cent of total employment. Over the previous ten years, this employment ratio had risen a full percentage point. The greatest increase was in communications, a rise of 80 per cent in the total employed.

Louisiana also experienced a significant increase in transportation and communication employment. As a per cent of total employment in 1950, 8.8 per cent of Louisiana workers were in these industries. In 1940, 6.6 per cent had been so employed.[40] The gains, by individual industry, however, were not the same as those of the United States. The "other transportation" part of the total accounted for 3.1 per cent of total employment, as it did in St. Mary Parish in 1950. Only 1.6 per cent of St. Mary's total employment was in this remaining category in 1940. In the 15 years which follow 1950, barge and tugboat transportation were to gain significantly in terms of overall employment. As offshore exploration became more intense, there developed the need for increased water transportation. Another need that develops later in terms of St. Mary Parish's ability to accommodate oil and gas exploration was trucking and warehousing; yet in 1950, this industry employed only 0.5 per cent of total St. Mary Parish workers.

Growth of the tertiary sectors in Louisiana by 1950 was approaching that of the United States. The 32,212 persons employed in Louisiana's wholesale trade sector were 3.7 per cent of the state's total employment. In the United States, 3.5 per cent of total employment was in the same sector. Only 1.5 per cent, 171 persons, in St. Mary Parish were in wholesale trade, considerably less than that in Louisiana and the nation.[41] However, as the primary sectors developed more fully during the 1950's and 1960's, wholesale and retail trade advanced similarly.

Retail trade did not increase its share of employment drastically in the United States from 1940 to 1950. The national increase in the ratio from 14.3 to 15.3 per cent was outshown by Louisiana's retail trade employment of 12.3 per cent of total employment in 1940 to 15.8 per cent in 1950. The largest part of total retail employment in Louisiana was retail other than that associated with food products. In St. Mary Parish, 4.2 per cent of total employment was in food and dairy stores.[42]

That segment of the tertiary industries composed of retail and wholesale trade had apparently grown faster in Morgan City than in the other aggregate areas. Total retail and wholesale trade employment in St. Mary Parish was 16 per cent of total employment, 18.8 per cent of total United States employment, and 19.5 of Louisiana's total employment.[43] Yet in Morgan City, such employment represented 21.9 per cent of the town's employment in 1950.[44] In and of itself this last figure is not surprising; however, Morgan City's having a greater concentration of retail and wholesale trade employment than the United States is surprising.

Only small gains were realized in St. Mary Parish from 1940 to 1950 in the employment of persons in finance, insurance, and real estate; however, major changes were underway in the remaining service sectors.

Private household employment had some substantial declines in employment which is not surprising since educational attainment levels were increasing and higher paying job opportunities were emerging. In the United States, only 2.9 per cent of total employment was in private households compared to 5.3 per cent in 1940. Louisiana had 5.7 per cent of total employment

in these households as of 1950 and St. Mary Parish had 6.0 per cent. Louisiana was particularly successful in decreasing this total employment share from 9.0 per cent in 1940.[45]

The professional fields began in 1950 to illustrate large gains in employment. In the nation, the ten-year period in question realized a 44 per cent increase in professionals (attorneys, physicians, etc.), to account for 8.5 per cent of total employment. Louisiana had 8.4 per cent of employed persons in 1950 as professionals and St. Mary Parish had 5.0 per cent.[46] Approximately 5.0 per cent of Morgan City's total employment in 1950 was in this professional category.[47]

In order to arrive at a fairly accurate standard of the components and causes of economic growth in St. Mary Parish, the technique of "shift-share" analysis was employed. This type of analysis separates employment growth into three components.[48]

The first component is one which provides a benchmark to compare the employment growth of the regional economy. It measures regional employment growth had it increased at the same rate as that of the national economy. The relevant formula is:

National growth = E_i ($US^*/US-1$), where:

E_i = regional employment in industry "i" in initial year,

US^* = total national employment in terminal year, and,

US = total national employment in initial year.

The second component, called the industrial mix component, adjusts for the growth characteristics of each industry. It illustrates whether a region's industries grew at a faster or slower pace than total national employment. This measure is calculated by:

Industrial mix = E_i ($US_i^*/US_i - US^*/US$), where:

US_i^* = total national employment in industry "i" in terminal year, and,

US_i = total national employment in industry "i" in initial year.

A region's industrial mix will be determined by changes in the various demand for the region's products, and changes in consumers' tastes and preferences, as well as changes in the various technological relationships.

The final component, and the one of most interest to this paper is the regional share component. This measure indicates whether a region's industry employment growth was faster or slower than that of the entire nation.

The regional share component is calculated by:

Regional share = E_i ($E_i^*/E_i - US_i^*/US_i$), where:

E_i^* = regional employment in industry "i" in terminal year, and,

E_i = regional employment in industry "i" in initial year.

The regional share component is affected by the particular advantages of the region: access to markets and inputs, changes in input-output relationships, and the numerous location decision factors /f.n. Hyclak/.

If one sums the industrial mix and regional share components, an indicator is given of the net relative growth of the regional economy when compared to the first component. A negative net relative change will indicate that the regional economy's employment growth was slower than that of the entire country or state. A positive net relative figure indicates that regional growth was faster than national growth, therefore, isolating to so extent, causal factors of regional employment growth.[49]

The results of the shift-share analysis for Louisiana and St. Mary Parish are shown in the following two tables. Most of the results are fairly self-explanatory. Naturally, the technique illustrates the strong decline in agricultural employment. However, the regional share component indicates a particular advantage of Louisiana and St. Mary Parish in forestry and fisheries.

An examination of the mining sector in both the state and the parish yields interesting results. In Louisiana, the regional advantage would have resulted in an increase of mining employment of more than 9,000 persons, considerably more than the increase due to national growth of 3,951. In St. Mary Parish, the difference was even greater. Local advantages and locational factors caused an increase of 668 persons, 480 per cent more than the increase in mining employment due to national growth. These shift-share results indicate an obvious advantage in Louisiana and St. Mary Parish in mining employment.

The state exhibited not as much advantage in the area of contract construction. Its regional share of employment growth in construction was less than the national growth; however, the industrial mix growth complemented the regional share to result in a positive net relative change. In St. Mary Parish, the regional share was negative, due probably to the predominantly agricultural nature of the parish.

In the majority of the manufacturing categories of employment, Louisiana and St. Mary Parish did not grow as quickly as the United States, as has been pointed out earlier. Louisiana experienced net relative negative changes in food and kindred products, lumber and wood products, and motor vehicles and equipment. The last category development of a negative net relative change is not surprising, since Louisiana has not pursued motor vehicle assembly and manufacturing plants. The cause of the negative net relative changes in the

TABLE 7

COMPONENTS OF CHANGES IN EMPLOYMENT,
LOUISIANA, 1940-50

Industry	National Growth	Industrial Mix	Regional Share	Net Relative Change
Agriculture	66,313	-110,943	-52,492	-163,435
Forestry and Fisheries	1,982	-791	398	-393
Mining	3,951	-3,751	9,100	5,349
Contract construction	9,315	14,140	6,547	20,687
Food and Kindred Products mfg.	5,545	249	-727	-478
Textile Mill mfg.	740	-527	-976	-1,503
Apparrel mfg.	1,011	244	-78	166
Lumber, wood products, furn. mfg.	7,865	7	-6,818	-6,811
Printing and Publishing mfg.	1,259	406	112	518
Chemicals & allied products mfg.	1,680	1,458	1,738	3,196
Electrical & other machinery mfg.	598	1,518	-676	842
Motor vehicles & equip. mfg.	133	123	-298	-175
Other transp. equip. mfg.	549	629	998	1,627
Other and miscellaneous mfg.	7,048	1,644	7,900	9,544
Railroads & railway express	3,860	-662	630	-32
Trucking and warehousing	1,965	896	-1,850	-954
Other transportation	4,509	5,486	488	5,974
Communications	1,334	2,671	186	2,857
Utilities & sanitary services	1,803	1,189	3,556	4,745
Wholesale trade	4,982	6,950	1,304	8,254
Food & dairy products stores	6,424	-2,730	2,333	-397
Eating & drinking places	4,909	4,493	1,288	5,781
Other retail trade	13,714	6,200	7,359	13,559
Finance, insurances & real estate	3,998	601	2,376	2,977
Hotels & other personal services	6,868	-4,245	-11	-4,256
Private households	18,141	-38,435	1,726	-36,709
Business and repair services	2,979	2,763	1,935	4,698
Entertainment, recreation services	1,593	-122	821	699
Medical, other professional services	12,371	8,060	6,508	14,568
Public administration	5,258	8,420	49	8,469
Armed services	853	6,689	82	6,771
Industry not reported	2,065	-361	3,802	3,441
TOTAL	205,616	-87,731	-2,600	-90,331

Source: Growth Patterns in Employment by County, 1940-1950, and 1950-1960, volume V, Southeast. U.S. Department of Commerce, Office of Business Economics, Washington: U.S. Government Printing Office, 1965.

TABLE 8

COMPONENTS OF CHANGES IN EMPLOYMENT,
ST. MARY PARISH, 1940-50

Industry	National Growth	Industrial Mix	Regional Share	Net Relative Change
Agriculture	922	-1,542	-767	-2,309
Forestry and Fisheries	144	-57	176	119
Mining	115	-110	668	558
Contract construction	176	268	-243	25
Food and Kindred Products mfg.	255	11	-313	-302
Textile Mill mfg.	1	0	3	3
Apparrel mfg.	1	0	-7	-7
Lumber, wood products, furn. mfg.	121	0	-204	-204
Printing and Publishing mfg.	7	2	13	15
Chemicals & allied products mfg.	4	3	30	33
Electrical & other machinery mfg.	6	14	4	18
Motor vehicles & equip. mfg.	0	0	0	0
Other transp. equip. mfg.	21	24	32	56
Other and miscellaneous mfg.	15	3	18	21
Railroads & railway express	34	-6	-6	-12
Trucking and warehousing	15	7	-38	-31
Other transportation	44	54	80	144
Communications	9	18	8	26
Utilities & sanitary services	9	6	26	32
Wholesale trade	25	34	19	53
Food & dairy products stores	95	-41	52	11
Eating & drinking places	67	62	-3	59
Other retail trade	116	52	171	223
Finance, insurances & real estate	21	3	7	10
Hotels & other personal services	64	-40	-15	-55
Private households	207	-438	129	-567
Business and repair services	35	33	-60	-27
Entertainment, recreation services	17	-1	17	16
Medical, other professional services	94	61	46	107
Public administration	44	71	-45	26
Armed services	0	0	5	5
Industry not reported	42	-7	-86	-93
TOTAL	2,726	-1,516	-283	-1,799

Source: Growth Patterns in Employment by County, 1940-50 and 1950-60, volume V, Southeast. U.S. Department of Commerce, Office of Business Economics, Washington: U.S. Government Printing Office, 1965.

previously mentioned industries plus textile mill manufacturing was a strong negative element of the regional share in each industry. One can only surmise that inaccessibility to national markets and supplies of industrial materials prevented these industries from improving their employment positions in Louisiana. The manufacture of "other transportation equipment, however, exhibited strong gains in Louisiana employment. The net relative change of 1,627 persons employed outweighed the national growth component of 549. Included in this manufacturing is, of course, ship and boat building and repairing. Since fishing was still very important to the Louisiana economy, it can be expected that boat building and repair would remain a viable employment source. The development of offshore mineral exploration only enhanced this industry.

In St. Mary Parish, the shift-shore analysis indicates that negative net relative changes occurred in food and kindred products, apparrel manufacturing, and lumber and wood products. The first two industrial categories' employment changes are not surprising, since both exhibited strong negative regional share components of the overall employment change.

By 1950, Louisiana was lagging behind the entire nation in the strength of its economic development. A distinct regional disadvantage shows up in the shift-share analysis of trucking and warehousing. This negative component is probably due to the locational problems associated with warehousing in Louisiana relative to that in more centrally positioned states. On the other hand, other transportation grew much faster than in the nation as a whole. The increase in employment in this industry was due not so much to the regional advantages of Louisiana, but to the industrial mix of the region when compared to the nation. The growth of industries along the Mississippi River and the needed water transportation to service the demands of these industries accounted for an employment change of 5,486 in this industry due to industrial mix.

In St. Mary Parish, trucking and warehousing, and railroads and railway express, experienced negative net relative changes. It should be understood, however, that there were only very small changes in these industries in St. Mary Parish due to national growth. The remaining of the transportation industry, however, experienced a significant gain in employment during the 1940-1950 decade. An examination of the table indicates that most of the growth in the industry was due to regional advantages and industrial mix. It will be shown later that this industry experienced great increases in employment in the next two decades, an obvious development caused by the advent of offshore and OCS petroleum and natural gas exploration.

Wholesale and retail trade in Louisiana, on the whole, grew faster than the same industry in the United States over the period of the 1940's. The wholesale trade sector experienced most of its employment growth due to industrial mix, rather than regional share. The exact same occurrence took place in St. Mary Parish. In the retail segment of trade, the employment growth in St. Mary Parish and Louisiana was approximately the same as that in the United States. In clothing stores and retail other than food-selling, St. Mary Parish experienced a greater local growth due to regional influences than did the state of Louisiana.

Employment in Louisiana's service sector did not exhibit surprising changes from 1940-1950. Personal and household service employment did not grow in the same direction as in the United States. Both of these sectors had net relative changes that were negative, indicating that much of the population, presumably women, were still employed in relatively low-paying occupations. Further analysis of the occupational structure of the state confirms this finding. Business and repair services, however, illustrated a particularly large growth in employment in Louisiana. Such increases would follow since transportation development was occurring quite rapidly, as were areas of mining, contract construction, and the chemicals industry. Finally, professional services exhibited extremely large gains in employment, due to all three components of employment growth.

TABLE 9

PERCENTAGE DISTRIBUTION OF INCOME OF FAMILIES AND UNRELATED INDIVIDUALS, 1949

Income Class	United States	Louisiana	St. Mary	Morgan City
Less than $500	13.3	14.4	13.3	14.0
$500 - $ 999	9.0	16.6	17.5	8.4
$1000 - $1499	8.2	12.6	12.0	7.8
$1500 - $1999	7.8	10.2	10.9	10.0
$2000 - $2499	9.5	9.4	10.3	12.4
$2500 - $2999	8.7	6.9	6.8	10.7
$3000 - $3499	9.7	6.6	6.8	8.2
$3500 - $3999	7.1	5.0	4.3	5.1
$4000 - $4499	5.9	4.1	5.0	6.9
$4500 - $4999	4.1	3.0	3.0	4.9
$5000 - $5999	6.3	4.2	4.1	6.2
$6000 - $6999	3.5	2.4	1.8	2.1
$7000 - $9999	4.0	2.6	3.0	3.8
$10000 and over	2.6	2.0	1.2	1.4
Median Income	$2619	$1810	$1831	$2438

Source: U.S. Bureau of the Census, 1950.

St. Mary Parish also experienced a slower growth rate in personal and household service employment. That is, the parish had a negative net relative change, indicating that much of its employment continued in relatively unskilled types of occupations. Counter to the development in the state, the regional advantage of St. Mary Parish resulted in a negative component in the business repair services.

In summary, the overall net relative change in both Louisiana and St. Mary Parish was negative. The strong gains in employment due to state

advantages in mining, contract construction, chemicals, miscellaneous manufacturing, wholesale trade, professional services, and retail trade, were overshadowed by the slower gains in agriculture, lumber and wood products, trucking and warehousing, and personal and household employment. Basically, the same structure of employment in St. Mary Parish in 1950 caused the parish to exhibit a negative net relative change, resulting in an overall slower growth of employment than in the nation.

A brief examination of the distribution of income for comparative purposes is helpful here to provide a clearer picture of St. Mary Parish and Morgan City's position relative to that of the state and the nation. In 1950, median income of families and unrelated individuals in the United States was $2,619. Louisiana did not compare favorably to the country, as could be expected. In the same year, the state's median income was $1,810, while that in St. Mary Parish was $1,831, slightly more than in Louisiana. Surprisingly, median income in Morgan City was $2,438, considerably more than for the parish and the state.[50]

In the United States, 38.3 per cent of the families and unrelated individuals had an income below $2,000. In Louisiana, the per cent whose income was below $2,000 in 1950 was 53.8, while St. Mary Parish included 53.7 per cent of its wage-earners in this category. Morgan City, however, had only 40.2 per cent with an income below this suggested poverty level.[51] While this may be an unreasonably high "poverty level income," it nevertheless points to the fact that incomes in Morgan City were considerably higher than in the rest of St. Mary Parish. Much of this difference can be attributed to the high concentration of farmers and farm laborers in the remaining parts of the parish. Those employed in relatively high-paying jobs would probably be employed either in Morgan City or Franklin, the two cities in the parish.

At income levels above $2,000, Morgan City equalled or bettered the distribution of income in the United States. Louisiana's distribution of income was also biased by the high proportion of agricultural workers in the state.

Much information about the existing distribution of income in 1950 can be gained by examining the distribution of employed persons by occupation and sex. In the United States, 8.9 per cent of all workers in 1950 were employed as professional or technical workers. Of the males, nationally, 7.4 per cent were professionals and 12.6 per cent of the females were similarly employed. In Louisiana, 13.1 per cent of the employed females were professional and technical workers, while 6.4 per cent of the male employment was in professional areas.[52]

St. Mary Parish employment among professional and technical occupations was 6.1 per cent of the parish's total employment. Only 4.8 per cent of the males were in these occupations and 10.7 per cent of the female employment was in technical and professional occupations. Morgan City more closely approximated the United States' distributions in professional occupations with 7.5 per cent of total employment, 6.2 per cent of the males

in these occupations, and 12 per cent of the city's females working as professionals and technical persons.[53] Since many of the United States' highest paid individuals are employed as professionals, it should not be surprising that Morgan City had a more preferable distribution of income than both Louisiana and St. Mary Parish in 1950. One cannot know definitely how many of these professionals in Morgan City were employed in the oil and gas industry. Some undoubtedly were in these related industries, but were a minor part of the overall employment structure.

The fact that Louisiana was still predominantly agriculturally oriented in 1950 surfaces when one examines the proportion of persons in farm-related occupations. Almost 8.0 per cent of the nation's employed persons were farmers or farm managers and most of these were males, as expected. However, 10.5 per cent of Louisiana's employed individuals were farmers or farm managers. In St. Mary Parish, the ratio of this occupation to total employment was only 2.5 per cent and in Morgan City, only 0.1 per cent.[54]

Slightly more than 2.0 per cent of United States employed persons in 1950 were employed as farm laborers. In Louisiana, 4.4 per cent were in the same occupation while in St. Mary Parish, sugar cane farming necessitated many laborers, as it had in 1940, and 14 per cent of the employed persons were laborers on farms. Interestingly, 11.2 per cent of the women were employed in similar occupations in St. Mary Parish. Of course, in Morgan City, only 1.6 per cent of employed individuals were employed as farm laborers.[55]

The emergence of a managerial class of occupations in Louisiana naturally accompanied the development of the state that was beginning during the years 1940-1950. Ten per cent of the state's males were employed as managers in 1950, just 0.9 per cent less than the ratio of the nation. In St. Mary Parish, the ratio of males employed as managers in 1950 was 10.2 per cent, but in Morgan City, the ratio was 15.2 per cent.[56] The influx of managers into Morgan City would seem appropriate as more and more petroleum-related companies began to locate in the area. In 1950, only nineteen offshore oil and gas wells had been completed. But 44 per cent of the wells completed in Louisiana in that year were in the southern half of the state. For all practical purposes, there were only a handfull of cities capable of being strategically located for onshore development: New Orleans, Baton Rouge, Lake Charles, Lafayette, Houma, Morgan City, Jennings, and Eunice. The location of these cities provided the firms with the locational advantage of being relatively close to the fields under development as well as having the facilities necessary to support petroleum and gas development.

The growth of clerical and kindred occupations is generally simultaneous with the growth of industry since there is need for secretarial help. In the United States, 12.5 per cent of the employed persons were in these types of occupations in 1950. Most of these were women, 4.3 million compared to only 2.6 million men. In Louisiana, 22.4 per cent of the females working were in clerical jobs. St. Mary Parish, however, had only 5.1 per cent of its total employment in clerical-related occupations while Morgan City had 6.3 of its

total employment in these occupations. Only 15 per cent of Morgan City's women were in similar types of employment, due mainly to the educational level and the skills achieved.[57]

The growth of the retail and wholesale trade sectors outlined previously must be accompanied by employment as sales workers. Seven per cent of national employment was in sales positions, but in Louisiana, 6.6 per cent of its labor force was employed as sales workers. Smaller ratios of national men and women were in sales jobs than in Louisiana. Ten per cent of St. Mary Parish's females were sales workers, but more than 13 per cent of Morgan City's females were likewise employed.

The employment of craftsmen and foremen in the United States in 1950 was the second largest occupational category after operatives. Nineteen per cent of all males were employed as craftsmen and foremen, compared to only 15.6 per cent in Louisiana. St. Mary Parish registered 14 per cent of its males as craftsmen and foremen while Morgan City had 16.4 per cent in this occupation.[58]

Operatives were the largest employment category in Morgan City, comprising 818 workers in 1950. Twenty-eight per cent of the City's males were employed operating machinery or vehicles and 15.5 per cent of the females were in the same occupation. The nation had 20.1 per cent of its workforce in this operative occupation, with 20.3 per cent of the males and 19.6 per cent of the females performing similar tasks. The large textile mill areas of the Northeast employed mostly women as did the fledgling electronics industry.[59]

In Louisiana, 17.6 per cent of the male workers were operatives and only 9.1 per cent of the females held similar positions. In St. Mary Parish, 21.6 per cent of the males were operatives and 10.2 per cent of the females were in this category.[60] It would not be until the early 1970's that Louisiana would make an attempt to attract light manufacturing industries into the state. With the entrance of these firms into the state's economy, more women became operatives of light machines and assembly equipment.

Private household work, the only work available to many women in Louisiana, particularly non-whites, was a prime cause of the poor distribution of income in Louisiana and St. Mary Parish. Twenty-two per cent of the working females in St. Mary Parish were employed in private households. Consider that fact along with the high proportion of parish males working as farm laborers, many on a seasonal basis, and one arrives at a reasonable explanation of the poor distribution of income in St. Mary Parish. In Louisiana, 19 per cent of the working females were in private households compared to only 8.7 per cent on a national basis.

By 1950, the trend was beginning toward more and more service employment in the United States. Four and one-third million of the total employment in the country in 1950 was in service-oriented sectors. These 4.3 million persons represented 7.7 per cent of total employment. Most of these were women, 12.4 per cent of female employees. In Louisiana, 8.2 per cent of the total employment was among service workers and more than half of these state service workers were females. Only 7.0 per cent of St. Mary's total employment was

service connected, yet 15 per cent of the females were in service sectors. Cities, of course, saw larger gains in service employment than rural areas. Morgan City was no different; 9.6 per cent of the total workers had service occupations, as did 5.5 per cent of the males and 20 per cent of the women.

By 1960, St. Mary Parish and Morgan City were becoming a major industrial area of Louisiana. It is the contention of this writer that most of the development was due to the locational advantages for petroleum and natural gas exploration and extraction. In 1949, disposable income in Louisiana had risen to $2.5 billion; the following decade saw income increase to $4.6 billion. St. Mary Parish, of course, shared in this increase and surpassed it. In St. Mary Parish's growth during the decade of the 50's, disposable income increased 140 per cent, from $21.975 million in 1949 to $52.846 million in 1959.[61] The gain registered by the state of Louisiana was 78.4 per cent over the same period.

As could be expected, the gains in disposable income did not originate from the agriculture sector of the state. Louisiana agricultural employment fell to 7.3 per cent of total state employment in 1960, compared to 17.4 per cent in 1950. Of course, this development was similar to that in the entire nation where the ratio of agricultural employment to total employment declined from 12 per cent in 1950 to 6.7 per cent in 1960. Probably due to the predominance of sugar cane farming in St. Mary Parish, agricultural employment as a per cent of total parish employment was 8.8 per cent. However, the decadal decline was rather significant from 18.5 per cent in 1950.[62]

Forestry and fishing employment remained a relatively viable source of employment in Morgan City by 1960. The data, unfortunately, were not separately reported for the city, but one can surmise that most of the employment in Morgan City in this industry was in fishing. As a per cent of total city employment, this industry registered 3.0 per cent compared to the 2.3 per cent in St. Mary Parish, 0.5 per cent in Louisiana, and 0.1 per cent in the entire United States. The 130 persons employed in forestry or fishery activities in Morgan City were more than one-third of those similarly employed in all of St. Mary Parish.[63]

The decade of the 1960's was a very important one for the mining sector in Louisiana. Approximately 669,000 persons were employed in this industry nationally, accounting for 1.0 per cent of the total number employed. In Louisiana, 3.6 per cent of the employed persons in 1960 were in the mining sector, 36,335 in total. Of these 36,000 persons in mining in Louisiana, over 20,000 were in the oil and gas field service sector. Covered payrolls were more than $28 million dollars in 1960 in only this sector of mining.[64]

In St. Mary Parish, 1,855 persons were employed in the mining industry, or 12.7 per cent of total employment in the parish. This percentage share of mining increased significantly from the 1950 level of 9.9 per cent. Of the 1,855 persons in mining, 40 per cent were in oil and gas field services with an annual payroll in 1960 of $1.06 million dollars. This gain in mining payrolls was 450 per cent over the 1953 mining payrolls.[65]

TABLE 10

PERCENTAGE DISTRIBUTION OF EMPLOYMENT
BY OCCUPATION, 1950

Occupation	Louisiana			St. Mary			Morgan City			United States		
	T	M	F	T	M	F	T	M	F	T	M	F
Professional, Technical	8.2	6.4	13.1	6.1	4.8	10.7	7.5	6.2	12.0	8.9	7.4	12.6
Farmers, Farm Managers	10.5	13.7	1.3	2.5	3.2	.3	.1	.1	--	7.8	10.4	.7
Managers, not farm	8.7	10.0	4.8	9.1	10.2	5.1	13.2	15.2	6.0	9.1	10.9	4.4
Clerical & Kindred Workers	10.0	5.6	22.4	5.1	2.9	12.4	6.3	3.9	14.8	12.5	6.5	27.8
Sales Workers	6.6	5.7	9.1	5.1	3.7	10.0	6.3	4.3	13.2	7.1	6.5	8.6
Craftsmen, Foremen	11.8	15.6	.8	11.0	14.0	5.6	13.0	16.4	.9	14.1	18.9	1.5
Operatives	15.4	17.6	9.1	19.1	21.6	10.2	25.4	28.2	15.5	20.1	20.3	19.6
Private Household Workers	5.1	.2	19.0	5.1	1.6	22.1	3.5	.4	16.0	2.5	.2	8.7
Service Workers	8.3	5.8	15.0	7.0	4.8	14.8	9.6	5.5	19.6	7.7	5.9	12.4
Farm Laborers	4.4	5.0	2.6	14.0	15.1	11.2	1.6	.2	--	2.6	3.4	.9
Laborers, not farm	9.9	13.0	.8	14.7	18.8	.6	15.1	19.3	.1	6.2	8.3	.8

Source: U.S. Bureau of the Census, 1949.

As mentioned earlier, in 1950, there were only 19 offshore wells completed from Louisiana. The minor role of offshore activities is evident when one considers that in 1950, total wells completed in Louisiana were 2,398; therefore, the offshore wells were 0.5 per cent. By 1960, total wells completed in Louisiana had risen to 3,712, but offshore wells were now 15 per cent of the total. In that year, a total of 553 offshore wells had been completed.[66]

Not all of these wells were of course producing wells. Some wells completed in previous years had been abandoned, or newly completed wells were found to be dry holes. In 1954, 3.3 million barrels of oil were produced from outer continental shelf regions off the Louisiana coast. By 1960, this production had increased to 49.3 million barrels of crude oil. Meanwhile, crude production in state offshore areas increased only 208 per cent from 1954 to 1960. Similar trends were of course developing in the production of natural gas. In 1954, 56.1 billion cubic feet of natural gas were produced in the OCS regions of Louisiana bordered by the Gulf of Mexico; however, production in 1960 of natural gas was 273.6 billion cubic feet, an increase of almost 400 per cent.[67]

The above figures should give one an obvious picture of the source of Louisiana and St. Mary Parish's increases in mining employment. Furthermore, later analysis of income in the parish compared with those in Louisiana and the United States will provide additional information on the results of this increased exploration and development of offshore oil and gas in Louisiana.

The growing affluence of the private sector of the United States as well as the growth of the economy in general was characterized by an increase in construction activity. The recessions of the 1950's did, of course, provide setbacks in construction activity, but overall, construction increased dramatically in the decade. Total national employment in construction increased to slightly over 4 million persons in 1960, or 6.1 per cent total employment. In Louisiana, as much of the South, contract construction has been a major part of the economic growth experience. More than 81,000 Louisianians were employed in construction in 1960, 8.2 per cent of total employment. In St. Mary Parish, 7.3 per cent of total employment was in contract construction, accounting for 1,062 persons.[68] Morgan City's share of the contract construction industry was greater than the other geographical divisions described. More than 8.0 per cent of its employment was in construction. Interestingly, two of the major construction yards for the oil industry are located just outside of Morgan City, in a neighboring parish. Therefore, many of the benefits economically did accrue to Morgan City from these construction sites for large offshore rigs and platforms, but the employment data collected from establishments would not surface for Morgan City or St. Mary Parish. These construction yards are within easy commuting distance of Morgan City as well as Thibodaux and Houma.

The manufacturing sector of food and kindred products continued to diminish in employment as St. Mary Parish developed in the 1950's. By 1960, only 4.1 per cent of total parish employment was in the production of food and similar products. Most of this production would have been in the nature

of frozen seafood, etc. In 1950, St. Mary Parish employed 8.1 per cent of its employees in this industry. As the parish developed industrially, more and more persons fled this type of employment for the more high paying construction and oil field jobs. Only 2.0 per cent of Morgan City's employment was in this food and kindred products sector of manufacturing.[69]

The loss of virgin forest areas by 1960 led to drastic declines in employment of persons in the lumber and wood products sectors. As late as 1950, 3.3 per cent of St. Mary Parish employment was in lumber and wood products; however, by 1960, this share of total employment had declined to 0.4 per cent. This small percentage accounted for only 62 employed persons in 1960.[70] Louisiana's loss of employment in this industry was not as drastic, but the decline was still evident. Total employment fell to 22,345 persons in the wood products industry, 2.2 per cent of total employment. The nation's ratio to total employment in the industry was only 1.7 per cent.[71] For comparative purposes, the lumber and wood products industry had been larger in Louisiana and St. Mary Parish when compared to the entire nation, therefore the decreases in state and parish employment loom more severe.

Printing and publishing in the United States has gained steadily in employment both in numbers and its share of total employment. In 1960, 1.8 per cent total employment in the nation was in printing and publishing. The increase in the availability of printed matter had pervaded all segments of the national economy. Louisiana employed only 0.8 per cent in printing and publishing in the same year. However, St. Mary Parish has increased its share from 0.4 per cent in 1950 of total employment to 0.7 per cent in 1960--104 persons. In Morgan City, only 0.8 per cent were employed in these types of industries.[72]

The chemicals industry, which has flourished in Louisiana, was also making strong gains in St. Mary Parish during the decade of the 1950's. By 1960, more than 18,000 persons in Louisiana were employed in chemicals--1.8 per cent of total employment. In the entire country, 1.4 per cent were similarly employed. However, in St. Mary Parish, 2.8 per cent of total employment was in chemicals and allied products, amounting to 410 persons.[73] This ratio in St. Mary Parish was indeed significant when one considers that in 1950, only 0.4 per cent of total parish employment was in the chemicals industry. Most of this employment in 1960 was outside of Morgan City which noted only nine persons in the city so employed. The development of a relatively large chemicals sector in the parish was probably an outgrowth of the petroleum availability, again a locational factor of importance.

As noted earlier, the manufacture of electrical and other machinery equipment in Louisiana and most of its parishes has lagged seriously behind the rest of the nation. However, a related industrial sector, the manufacture of other transportation equipment, that is, other than motor vehicle equipment, has exhibited some rather strong gains in the state. In 1960, 1.5 per cent of total employment in the nation was in the manufacture of transportation other than motor vehicles. In Louisiana, the ratio to total employment was only 0.7 per cent, 6,965 persons out of a total of 1,026,911.

TABLE 11

EMPLOYMENT BY INDUSTRY,
1960

Industry	U.S.	LA.	St. Mary	Morgan City
Agriculture	4,425,673	73,295	1,286	5
Forestry and Fisheries	99,201	5,515	336	130
Mining	669,862	36,335	1,855	571
Contract construction	4,025,758	81,033	1,062	366
Food and Kindred Products mfg.	1,899,578	30,888	599	90
Textile Mill mfg.	982,373	740	8	0
Apparrel mfg.	1,212,350	5,859	0	0
Lumber, wood products, furn. mfg.	1,099,998	22,345	62	0
Printing and Publishing mfg.	1,195,766	7,904	104	34
Chemicals & allied products mfg.	899,415	18,296	410	9
Electrical & other machinery mfg.	3,178,042	6,590	127	4
Motor vehicles & equip. mfg.	873,743	654	4	0
Other transp. equip. mfg.	1,015,013	6,965	269	99
Other and miscellaneous mfg.	5,849,400	57,020	412	139
Railroads & railway express	973,684	12,646	79	17
Trucking and warehousing	944,630	12,141	111	41
Other transportation	925,461	31,993	1,056	488
Communications	850,738	12,039	126	45
Utilities & sanitary services	930,487	18,780	219	57
Wholesale trade	2,289,157	37,430	496	198
Food & dairy products stores	1,797,034	31,023	459	170
Eating & drinking places	1,855,663	31,016	443	214
Other retail trade	6,364,461	101,110	1,149	418
Finance, insurances & real estate	2,790,468	36,131	196	73
Hotels & other personal services	2,077,891	33,694	331	151
Private households	2,039,072	67,272	1,053	271
Business and repair services	1,684,557	23,693	375	176
Entertainment, recreation services	536,923	7,135	73	24
Medical, other professional services	7,874,512	120,390	1,237	389
Public administration	3,278,334	43,607	345	85
Armed services	1,733,405	19,099	8	--
Industry not reported	2,608,085	34,273	355	84
TOTAL	66,372,649	1,026,911	14,646	4,398

Source: Regional Employment by Industry, 1940-1970. U.S. Department of Commerce. Social and Economic Statistics Administration, Bureau of Economic Analysis, Washington: U.S. Government Printing Office, 1972, and U.S. Bureau of the Census, 1960 Census of Population, Social and Economic Characteristics, Louisiana. Washington: U.S. Government Printing Office, 1961.

However, in St. Mary Parish, 269 persons were employed in such manufacturing. These 269 persons accounted for a ratio of 1.8 per cent of total employment, up from 1.4 per cent in 1950.[74] In Morgan City, 2.2 per cent were employed in this sector.[75] Virtually all of the other transportation manufacturing in St. Mary Parish and Morgan City was in the area of boat building and repairing for use in the petroleum industry and fishing. As the fishing sector gradually lost influence and fishermen took other jobs, barge and tugboat building operations increased in importance.

It comes as no surprise that employment in railroads and railway express declined in the United States as competition from trucking increased. By 1960, only 1.5 per cent of national employment was in the former sector, compared to 2.5 per cent in 1940. The decline was similar in Louisiana and St. Mary Parish. It is interesting, however, that by 1960, the share of employment as a per cent of total employment in the trucking and warehousing industry leveled off. In the United States, 1.4 per cent of total employment was in trucking; in Louisiana, 1.2 per cent. St. Mary Parish registered 0.8 per cent of its total employment in trucking in warehousing, but this 1960 ratio did not remain level during the following ten years. Morgan City had a slightly higher ratio of trucking employment to its total employment, 0.9 per cent.[76]

An industry which illustrated interesting developments in St. Mary Parish and Morgan City during the 1950's was that called "other transportation". Employment nationally in this industry was 925,461 or 1.4 per cent of total employment in 1960. In the state, 3.2 per cent of total employment was in transportation other than trucking. St. Mary Parish, however, employed 1056 persons in this sector, 7.2 per cent of its total employment and Morgan City had a large 11.1 per cent of its total employment in this sector. In 1950, St. Mary Parish registered 3.1 per cent of total employment in other transportation.[77] Such an industry gives a good indication of the type of supportive industries that were necessary for the development of the petroleum industry in the southern part of Louisiana. An additional insight into this sector's importance can be gained by examining the sector's payroll. In 1959, water transportation payroll in Louisiana was 2.0 per cent of total payrolls; however, in St. Mary Parish, this payroll was 8.0 per cent of the parish's total.[78]

Increases in population during the latter part of the 1940's and throughout the 1950's necessitated large increases in employment nationally in utilities, communication, and sanitary services. In Louisiana, more than 30,000 persons were in this part of the services while in St. Mary Parish, approximately 300 persons were so employed. In Louisiana, this employment represented about 3.1 per cent of total employment, compared to 2.7 per cent in the entire United States and 2.4 per cent in St. Mary Parish.[79] Morgan City's employment ratio to the total was about the same as that for St. Mary Parish.

The wholesale trade sector expanded very rapidly in St. Mary Parish during the 1950's. In 1950, 1.5 per cent of its employment was in wholesale trade, but by 1960, this ratio had increased to 3.4 per cent. Louisiana

TABLE 12

DISTRIBUTION OF EMPLOYMENT
BY INDUSTRY, 1960

Industry	U.S.	LA.	St. Mary	Morgan City
Agriculture	6.7	7.3	8.3	.1
Forestry and Fisheries	.1	.5	2.3	3.0
Mining	1.0	3.6	12.7	12.9
Contract construction	6.1	8.2	7.3	8.3
Food and Kindred Products mfg.	2.9	3.1	4.1	2.0
Textile Mill mfg.	1.5	.1	0	0
Apparrel mfg.	1.8	.6	0	0
Lumber, wood products, furn. mfg.	1.7	2.2	.4	0
Printing and Publishing mfg.	1.8	.8	.7	.8
Chemicals & allied products mfg.	1.4	1.8	2.8	.2
Electrical & other machinery mfg.	4.8	.7	.9	.1
Motor vehicles & equip. mfg.	1.3	.1	0	0
Other transp. equip. mfg.	1.5	.7	1.8	2.2
Other and miscellaneous mfg.	8.8	5.7	2.8	4.2
Railroads & railway express	1.5	1.3	.5	.4
Trucking and warehousing	1.4	1.2	.8	.9
Other transportation	1.4	3.2	7.2	11.1
Communications	1.3	1.2	.9	1.0
Utilities & sanitary services	1.4	1.9	1.5	1.3
Wholesale trade	3.4	3.7	3.4	4.5
Food & dairy products stores	2.7	3.1	3.1	3.9
Eating & drinking places	2.8	3.1	3.0	4.9
Other retail trade	9.6	10.2	7.8	9.5
Finance, insurances & real estate	4.2	3.6	1.3	1.7
Hotels & other personal services	3.1	3.5	2.3	3.4
Private households	3.1	6.9	7.2	6.2
Business and repair services	2.5	2.4	2.6	4.0
Entertainment, recreation services	.8	.7	.5	.5
Medical, other professional services	11.9	12.1	8.4	8.8
Public administration	4.9	4.3	2.4	1.9
Armed services	2.6	1.9	.1	
Industry not reported	3.1	3.3	2.4	1.9
TOTAL	100.0	100.0	100.0	100.0

Source: Table 11.

had slightly more than St. Mary Parish, with 3.7 per cent, and Morgan City registered 4.5 per cent of its total employment in wholesale trade.[80]

The growth of the retail trade in Morgan City followed that of wholesale trade. Wholesalers will normally accompany the primary industries because it is this link in economic activity most of them serve. As the city's population increased in response to industry's location, retail establishments began to locate in Morgan City and employment in this sector increased. Nationally, 15.1 per cent of total employment was in the retail trade area. Most of this 15.1 per cent (9.6 per cent) was in retail trade not connected with food and dairy stores. In Louisiana, 16.4 per cent of total employment was in retail trade. St. Mary Parish registered 13.9 per cent of its employment connected with retail trade, however, Morgan City more closely matched the national levels with 18.2 per cent of city employment in retail trade.[81]

Of the remaining service areas of employment nationally, medical and other professional employment increased the greatest, with a ratio to total employment increasing from 7.4 per cent in 1950 to 11.9 per cent in 1960. Louisiana followed the nation fairly closely in those employment ratios.[82] It is interesting to note a rather strange development with regard to household employment. On both the national and state levels, this type of employment gained in its share of total employment.

Once again, it is helpful to examine the results of the shift-share analysis for the state to determine in which industries Louisiana exhibited particularly strong, self-sustained growth. The strongest overall gain in employment from local or regional advantages was in the medical and other professional categories. It will be noticed that much of the gain in employment originated with the industrial mix component. This may indicate that the medical and other professionals were simply catching up to the rest of the nation as Louisiana became relatively more affluent.

Relatively large net relative changes were exhibited in the fields of private households, finance, insurance, and real estate, other retail trade, and miscellaneous manufacturing. In all of these sectors, other than miscellaneous, regional advantages played important roles in influencing the gain in employment. In contract construction, the influences on the growth of employment were somewhat dualistic, being both dependent upon national growth and regional influences.

Of any of the industries, mining illustrated the single largest gain in employment due to regional share, 19,322. These results should not be surprising since mining increased in importance so drastically during the 1950's. The previously quoted data on completed wells and offshore petroleum development are enough to lend support to the regional advantages of increased employment.

The largest net relative changes in St. Mary Parish were in the following industries: mining, chemicals and allied products, other transportation, wholesale trade, and medical and other professionals. Employment in other

TABLE 13

COMPONENTS OF EMPLOYMENT CHANGE,
LOUISIANA, 1950-1960

Industry	National Growth	Industrial Mix	Regional Share	Net Relative Change
Agriculture	23,465	-81,770	-19,974	-101,744
Forestry and Fisheries	1,397	-3,696	-1,206	-4,902
Mining	3,738	-10,944	19,322	8,378
Contract construction	10,053	-3,316	9,356	6,040
Food and Kindred Products mfg.	4,005	3,468	-2,454	1,014
Textile Mill mfg.	311	-775	-807	-1,582
Apparrel mfg.	769	-324	445	121
Lumber, wood products, furn. mfg.	4,730	-7,886	-8,208	-16,094
Printing and Publishing mfg.	1,006	1,167	-768	399
Chemicals & allied products mfg.	1,730	1,749	3,640	5,389
Electrical & other machinery mfg.	570	1,145	1,194	2,339
Motor vehicles & equip. mfg.	71	-85	211	126
Other transp. equip. mfg.	656	3,679	-1,606	2,073
Other and miscellaneous mfg.	6,660	1,405	5,932	7,337
Railroads & railway express	2,834	-8,726	234	8,492
Trucking and warehousing	1,298	1,193	1,257	2,450
Other transportation	4,241	-3,488	3,846	358
Communications	1,423	-1	1,423	1,422
Utilities & sanitary services	2,061	-139	3,549	3,410
Wholesale trade	4,941	-1,769	5,512	3,743
Food & dairy products stores	4,663	-5,261	1,500	-3,761
Eating & drinking places	4,505	-2,634	44	-2,590
Other retail trade	12,184	1,507	8,713	10,220
Finance, insurances & real estate	3,401	5,451	5,310	10,761
Hotels & other personal services	4,392	-3,176	4,104	928
Private households	7,658	712	9,435	10,147
Business and repair services	2,918	1,352	572	1,924
Entertainment, recreation services	1,280	-1,143	-1,267	-2,410
Medical, other professional services	11,353	31,144	4,548	35,692
Public administration	5,178	3,981	1,002	4,983
Armed services	1,676	5,796	803	6,599
Industry not reported	2,052	25,721	-6,753	18,968
TOTAL	137,229	-45,352	140,481	95,129

Source: Growth Patterns in Employment by County, 1940-1950 and 1950-1960, volume V, Southeast. U.S. Department of Commerce, Office of Business Economics, Washington: U.S. Government Printing Office, 1965.

transportation led the group with a net relative change of 598 persons, due to both the industrial mix component and the regional share component. The same is true for the professional sector, including medical personnel. The gain in employment of persons in other transportation was mostly to the regional share component, indicating local or regional advantages for this industry. Greatest interest of course is in the mining sector's contribution. The regional share contributed 1,077 persons to the gain in employment while growth due to national advantages was only 171 persons. Industrial mix, unfortunately, exhibited a negative influence on the employment, causing a smaller than desirable net relative change.[83]

Distribution of occupations had undergone some fairly major changes in the decade of the 1950's. By 1960, 4.0 per cent of United States' males were professionals, but almost 8.0 per cent of the nation's females were in similar occupations. In the state of Louisiana, the percentage difference between males and females in professional and technical occupations was even greater than on the national level in 1960. Three per cent of Louisiana's males were in professional positions, while 8.0 per cent of the females were likewise employed. In St. Mary Parish, only 1.9 per cent of the working males were categorized as professionals while 9.1 per cent of the parish's females were in similar occupations. The differential was not nearly as great in Morgan City where 3.3 per cent of the males and 4.6 per cent of the females were professionals.[84]

Apparently, Morgan City had a fairly high proportion of its working females in clerical positions when compared to both the state and the parish. However, sales worker ratios were quite close in 1960 regardless of which geographical division is examined.

The city had a high ratio of male craftsmen when compared to all other areas. More than one-fourth of working males in Morgan City were employed as craftsmen, yet only 10.2 per cent were so employed nationally and 9.1 per cent in the entire state.[85]

Operatives of equipment, particularly transportation equipment, provided 23.4 per cent of male employment in the United States. In Louisiana, 24.6 per cent of the males were also employed as operatives. However, in St. Mary Parish, more than 30 per cent were operatives, yet only 15.9 per cent operated equipment in Morgan City.

The petroleum and natural gas industries provided jobs to many individuals who perhaps had relatively low levels of educational attainment. In addition, because of the risk of the work and other disamenities, these workers have traditionally been better paid than others in similar occupations. In 1960, median earnings in the United States for professional occupations were $6,640. In Louisiana, however, the same occupation group had median earnings of $6,053--10 per cent below the national median. Professionals in St. Mary Parish and Morgan City averaged approximately $5,680 in 1960, more than $1,000 below the national level.[86]

TABLE 14

COMPONENTS OF EMPLOYMENT GROWTH,
ST. MARY PARISH, 1950-1960

Industry	National Growth	Industrial Mix	Regional Share	Net Relative Change
Agriculture	320	-1,116	13	-1,103
Forestry and Fisheries	124	-329	-262	-591
Mining	171	-500	1,077	577
Contract construction	133	-44	111	67
Food and Kindred Products mfg.	141	122	-573	-451
Textile Mill mfg.	1	-2	4	2
Apparrel mfg.	0	0	0	0
Lumber, wood products, furn. mfg.	57	-96	-271	-367
Printing and Publishing mfg.	8	9	37	46
Chemicals & allied products mfg.	8	8	342	350
Electrical & other machinery mfg.	7	14	61	75
Motor vehicles & equip. mfg.	0	0	4	4
Other transp. equip. mfg.	24	-135	-47	-182
Other and miscellaneous mfg.	14	3	304	307
Railroads & railway express	23	-71	-21	-92
Trucking and warehousing	7	6	55	61
Other transportation	53	-44	704	660
Communications	10	0	50	50
Utilities & sanitary services	12	-1	133	132
Wholesale trade	26	-6	306	300
Food & dairy products stores	72	-81	3	-78
Eating & drinking places	59	-34	40	6
Other retail trade	120	15	242	257
Finance, insurances, & real estate	17	27	42	69
Hotels & other personal services	39	-28	69	41
Private households	104	10	266	256
Business and repair services	22	10	203	213
Entertainment, recreation services	15	-13	-26	39
Medical, other professional services	86	235	363	598
Public administration	37	28	44	72
Armed services	1	3	0	3
Industry not reported	17	210	21	231
TOTAL	1,728	-1,530	3,295	1,765

Source: Growth Patterns in Employment by County, 1940-1950 and 1950-1960, volume V, Southeast. U.S. Department of Commerce, Office of Business Economics, Washington, D.C.: U.S. Government Printing Office, 1965.

TABLE 15

DISTRIBUTION OF EMPLOYED PERSONS,
BY OCCUPATION, 1960
(per cent)

	United States			Louisiana			St. Mary			Morgan City		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Professional & Technical	11.2	3.9	7.8	10.3	2.8	7.8	7.7	1.6	9.1	8.5	3.3	4.6
Farmers & Farm Managers	3.8	4.4	.4	3.3	5.2	.4	1.4	1.0				
Managers, except farm	8.4	2.3	1.2	9.1	1.6	1.2	11.9	.8	1.3	16.0		1.2
Clerical and Kindred Workers	14.4	5.0	2.2	11.9	2.4	2.2	5.2	1.4	1.4	8.8		4.0
Sales Workers	7.2	1.5	1.2	6.5	1.0	1.2	4.2	.4	1.5	5.5		1.2
Craftsmen, Foremen	13.5	10.2	.3	12.4	9.1	.3	13.3	9.9	.2	14.6	25.3	
Operatives	19.4	23.4	7.8	16.4	24.6	7.8	22.6	30.1	9.2	21.2	15.9	16.7
Private Household Workers	2.7	.7	48.3	6.1	.6	48.3	6.6	.3	56.4	5.4		52.7
Service Workers	8.4	13.7	23.1	9.4	11.4	23.1	7.3	5.7	14.6	9.2	16.1	17.1
Farm Laborers	2.2	7.1	1.9	2.8	9.5	1.9	4.8	21.4	4.1	.1		
Laborers, except farm	4.8	19.4	.7	7.5	27.0	.7	10.5	24.2		7.6	35.4	

Source: U.S. Bureau of the Census, 1960.

Nevertheless, median income for families and unrelated individuals in Morgan City in 1960 was $5,305 and that for the nation was $5,660. The difference is not as severe, and the reason is obvious. Much of the concentration in occupations in Morgan City was in craftsmen-type of occupations and operatives. Median earnings in these two occupations in Morgan City were $4,978 and $4,370 respectively. With a high concentration of labor in relatively unskilled, manual labor-oriented work, median income was quite high by national standards since these occupations were high paying in the petroleum industry.[87]

The presence of relatively high paying positions in Morgan City, be they of a blue-collar nature, was evidenced in the distribution of income relative to that in St. Mary Parish, Louisiana, and the United States. Morgan City had fewer persons and families with an income of less than $1,000 than in the other three geographical areas. The city's distribution of families with incomes of $1,000 to $5,000 was slightly worse than the same distribution in the entire United States; however, Morgan City had, in proportion to its total income earners, fewer persons than the state or the parish. Examining the city's distribution of earners with incomes between $5,000 and $10,000, the distribution in Morgan City was better or comparable to that in St. Mary Parish or in Louisiana. On the upper end of the income scale, the United States did outstrip Morgan City and the country had a more favorable distribution of upper income groups.[88]

TABLE 16

DISTRIBUTION OF INCOME,
1960
(per cent)

All Families	St. Mary	Morgan City	Louisiana	U.S.
Under $1,000	7.0	4.9	9.2	5.6
$1,000 - $1,999	12.3	8.0	13.8	7.5
$2,000 - $2,999	12.3	11.5	12.6	8.3
$3,000 - $3,999	11.1	11.1	11.5	9.5
$4,000 - $4,999	10.6	10.7	10.8	10.9
$5,000 - $5,999	10.7	12.3	10.1	12.3
$6,000 - $6,999	12.0	14.7	8.2	10.7
$7,000 - $7,999	7.3	9.0	6.4	8.6
$8,000 - $8,999	4.3	4.2	4.5	6.6
$9,000 - $9,999	2.9	2.9	3.2	4.8
$10,000 - $14,000	6.5	6.3	6.7	10.5
$15,000 - $24,999	1.9	2.3	2.1	3.3
$25,000 - over	.9	1.7	1.0	1.3

Source: U.S. Department of Commerce, Bureau of the Census, 1960.

The Decade of the 1960's: Unprecedented Growth.

The decade of the 1960's was characterized throughout the United States as one of extensive economic growth and a general broadening of the economic base of the country. Total employed persons increased to 79,307,880, a sizable gain over the 1960 employment of slightly over 66 million. Total employment in Louisiana rose to 1,204,305 persons in 1970 while St. Mary Parish's employment increased to 19,365. Approximately 25 per cent of St. Mary Parish's employment was in Morgan City in 1970.[89] Effective buying income in Louisiana increased from $4.5 billion in 1959 to $9.2 billion in 1969, a 104 per cent increase. In St. Mary Parish, the increase was one of 210 per cent, from $52.8 million in 1959 to $164.6 million in 1969.[90]

Agricultural employment, of course, continued to decline in importance in the United States over the decade of the 1960's. The per cent of total employment in agriculture in 1970 was 3.5 per cent, compared to 6.7 per cent in 1960. Louisiana's agriculture sector employed 3.7 per cent of the state's total employed persons. This ratio was a decline from 7.3 per cent in agriculture in 1960. In 1960, 8.8 per cent of total employment in St. Mary Parish was in agriculture, but by 1970, this ratio of total employment had declined to 4.3 per cent, or 835 workers.[91]

Forestry and fisheries continued to lose workers in Louisiana and St. Mary Parish during the 1960's. In the entire United States, this sector did not employ more than 0.2 per cent of total employed persons since 1940. However, by 1970, only 1.5 per cent of St. Mary Parish's total employment was in forestry and fisheries. In the state, the ratio was slightly less than 0.5 per cent. Census data for 1970, included forestry and fisheries employment with agriculture employment for Morgan City. Nevertheless, only 1.8 per cent of the city's total employment was in these two sectors.[92] It can be reasonably assumed that most of this 1.8 per cent of total employment was in forestry and fisheries, preferably the latter.

In 1970, less than 1.0 per cent of total United States employment was in the mining sector. In Louisiana, however, 3.9 per cent of the total employment was in the same sector; of the 46,660 persons in mining in Louisiana, 55 per cent were in the sector known as Oil and Gas Field Services (SIC #1380). In St. Mary Parish, however, 12.1 per cent of total employment was in mining and 88 per cent of these 2,352 workers were in oil and gas field services.[93]

In 1969, mining payrolls of $111.6 million comprised approximately 9.2 per cent of total state payrolls. These mining-associated payrolls had increased 80.5 per cent over these ten years. Oil and gas extraction payrolls increased to $88.8 million in 1969, a rise of 39.4 per cent above the 1959 figure.[94]

St. Mary mining payrolls in 1959 totaled $777,000 dollars or 11.3 per cent of total parish payrolls. By 1969, this ratio had risen to $8.003 million, and 30.4 per cent of total parish payrolls.[95] St. Mary Parish's

$7.173 million payroll in oil and gas extraction for 1969 was 27.2 per cent of total parish payrolls compared to 7.0 per cent in the entire state. Indeed, over the ten years in question, mining payrolls in St. Mary Parish increased almost 1000 per cent.[96]

These increases in payrolls and employment in St. Mary Parish's oil and gas sector are not surprising when one examines the trends in OCS well activity and production. In 1959, 466 offshore wells were completed in Louisiana offshore waters. Forty-five per cent or 208 of these wells were in OCS regions.[97] In 1969, a total of 1,152 wells was completed and the proportion of OCS wells had declined to 31 per cent. However, OCS oil (crude and condensate) increased 741.7 per cent over the same ten years to 299.9 million barrels. Meanwhile, oil production within the three-mile limit rose to 65.8 million barrels in 1969, a 77.3 per cent increase over the 37.1 million barrels of 1959.[98]

Natural gas and casinghead gas produced in OCS waters in 1959 totaled 207.4 billion cubic feet and inside the three-mile limit, 121.8 billion cubic feet.[99] In the ten years following 1959, OCS gas production increased 784.2 per cent to 1,834.3 billion cubic feet. The increase within three-miles of the Chapman Line was 428.9 per cent to 644.7 billion cubic feet.[100]

Morgan City's share of total employment in mining was 11.6 per cent in 1970, somewhat less than in 1960. As will be illustrated later, most of the growth in the city's mining sector seems to have occurred prior to 1970. Because of geographical limitations, firms locating in St. Mary Parish had to locate outside of the city limits of Morgan City. Evidence of this can be seen when one examines first-hand the extensive development east and west of Morgan City along U.S. Highway 90. Morgan City essentially provided the starting point for industries associated with offshore oil and gas. Once physical limitations of the city were reached, broadening of the industrial base occurred along the outskirts of the city following major transportation routes. Interestingly, the Department of Commerce's latest data for St. Mary Parish indicates that the percentage of total employment in mining has increased to 15 per cent in 1973.

Employment in contract construction in the United States declined slightly as a per cent of total employment in 1970. In 1960, 6.1 per cent of total employment was in contract construction, but by 1970, this figure had declined to 5.8 per cent. Total persons employed in this sector, however, increased from 4,025,758 in 1960 to 4,587,115 in 1970.[101] The decline in the proportion of total employment in construction is probably due to the changing structure of employment; i.e., more persons employed in services and retail and wholesale trade.

Louisiana's employment in contract construction in 1970 was over 96,000 or 8.1 per cent total employment. This ratio was down slightly from the high of 8.2 per cent in 1960. In St. Mary Parish, 7.7 per cent of total employment was in contract construction and in Morgan City, 5.7 per cent of total employed persons were in construction.[102] It should not be surprising that such a small percentage of Morgan City's employment, relative to that

in St. Mary Parish and in Louisiana, was in contract construction. The geographical limitations of the city would apparently be the biggest factor against further increases in contract construction employment.

In the manufacturing sector, one of the more interesting developments in St. Mary Parish is the gradual decline of persons employed in food and kindred products. In 1940, 9.4 per cent of total employed persons in St. Mary Parish were in kindred food production. This ratio dropped to 8.1 per cent in 1950, 4.1 per cent in 1960, and in 1970, only 2.0 per cent were in food production. In Morgan City, only 0.6 per cent of its employment was in food production. Louisiana's ratio of total employment in this sector increased to 3.1 per cent in 1960, but declined to 2.0 per cent in 1970.[103] Similar declines in the national ratio of food production employment to total employment occurred in the United States, but the national decline was not as dramatic as that in St. Mary Parish. Once again, the change in employment structure due to the changing nature of the parish and especially of Morgan City forced changes in employment to accommodate the oil and gas industries. These latter industries were more high-paying in the areas of manual labor; therefore, the market for labor reallocated as more oil and gas were produced and searched for.

Similar shifts in employment occurred in the lumber and wood products sector. In 1940, 458 persons were employed in St. Mary Parish in this industry. Their numbers gradually declined to 48 in 1970, or 0.2 per cent. The United States employed only 1.3 per cent of its total employed persons in lumber and wood products while Louisiana employed 1.5 per cent. The Louisiana ratio had declined steadily from a high of 3.9 per cent in this sector in 1940.[104]

St. Mary Parish did illustrate strong growth in the chemicals and allied products industries when compared to the nation and the state. Almost 3.0 per cent of its total employment was in chemicals in 1970, compared to only 0.4 per cent in 1950. In Morgan City, however, only 0.3 per cent of its total employment was in chemicals in 1970.[105] This is not surprising since chemicals manufacturing requires large land spaces, not available within the city's boundaries. The ratio of employment to total employment in Louisiana in 1970 was 2.2 per cent. This ratio for the state illustrated steady gains over the years studied. The 2.2 per cent ratio represented over 26,000 persons engaged in chemicals production in Louisiana, whereas in the entire United States, only 1.3 per cent of the total workers were in this sector.[106]

As indicated earlier, machinery manufacturing and motor vehicle manufacturing and assembly are virtually non-existent in Louisiana and St. Mary Parish. By 1970, this sector of employment had changed little. In the state, only 1.2 per cent of employees were in these types of manufacturing. In the United States, however, 6.6 per cent of total employment was in machinery and motor vehicle manufacturing in 1970.

Manufacturing of "other transportation" equipment is another matter. Only 1.5 per cent of total national employment was in this category.

TABLE 17

EMPLOYMENT BY INDUSTRY,
1970

Industry	U.S.	LA.	St. Mary	Morgan City
Agriculture	2,814,467	43,977	835	101**
Forestry and Fisheries	101,963	4,919	290	
Mining	631,918	46,660	2,352	666
Contract construction	4,587,115	96,951	1,491	324
Food and Kindred Products mfg.	1,484,766	23,883	391	35
Textile Mill mfg.	1,020,111	827	6	6
Apparrel mfg.	1,306,732	8,538	0	0
Lumber, wood products, furn. mfg.	1,035,021	18,237	48	5
Printing and Publishing mfg.	1,408,413	9,477	123	52
Chemicals & allied products mfg.	1,050,032	26,721	568	20
Electrical & other machinery mfg.	4,124,589	13,423	184	0
Motor vehicles & equip. mfg.	1,071,602	764	0	0
Other transp. equip. mfg.	1,190,579	18,033	580	228
Other and miscellaneous mfg.	6,328,077	65,374	755	185
Railroads & railway express	671,759	8,816	48	4
Trucking and warehousing	1,146,878	14,734	309	122
Other transportation	1,183,131	35,137	1,266	516
Communications	1,140,153	16,233	171	53
Utilities & sanitary services	1,055,099	21,074	375	150
Wholesale trade	3,144,799	56,039	860	377
Food & dairy products stores	2,090,914	36,339	688	175
Eating & drinking places	2,550,333	36,206	748	245
Other retail trade	7,821,854	120,142	1,689	592
Finance, insurances & real estate	3,848,101	51,362	620	217
Hotels & other personal services	2,318,637	37,265	389	172
Private households	1,332,811	47,904	794	182
Business and repair services	2,412,030	35,049	783	322
Entertainment, recreation services	651,759	8,480	169	35
Medical, other professional services	13,577,320	210,490	2,246	684
Public administration	4,207,929	53,614	560	201
Armed services	1,999,088	37,637	27	--
Industry not reported	4,760,484	84,252	1,471	--
TOTAL	79,307,880	1,204,305	19,365	5,732

**Forestry and Fisheries included with agriculture.

Source: U.S. Department of Commerce, Bureau of the Census and Bureau of Economic Analysis.

Louisiana's ratio to total state employment was 1.5 per cent, not overwhelming when considering the large degree of water transportation in the state. In St. Mary Parish, however, 3.0 per cent of the parish employment was in the manufacturing of transportation other than motor vehicles and in Morgan City, the ratio in 1970 was 4.0 per cent. Both Louisiana and St. Mary Parish experienced steady gains in this sector's employment.[107]

Trucking and warehousing are extremely important to the growth of the oil industry, regardless of its location. In St. Mary Parish, employment in this industry increased as a percentage of total parish employment from 0.6 per cent in 1940 to 1.6 per cent in 1970. The increase in absolute numbers was more startling, an increase from 59 persons in 1940 to 309 persons in 1970. Morgan City employed 2.1 per cent of its total employees in trucking and warehousing.[108] This is especially significant since Morgan City was used as a stock point for transportation purposes. From Morgan City, supplies were shipped to offshore oil and gas rigs because of the city's access to deep water. As OCS development proceeded, increased demands for trucking and warehousing in Morgan City led to more firms entering the area to compete for the offshore supply market. Of course, employment increased as the firms located in the environs.

In the United States, the industry categorized as "other transportation" has never been a strong contender for high levels of employment relative to the other industries in the nation. Less than 2.0 per cent of the total employment in the country has been involved in barge, towing, lighterage, and similar transportation.

In Louisiana, transportation other than commercial trucking and private motor vehicles has been a viable source of employment. The ratio of this sector's employment to total state employment has increased from 2.2 per cent in 1940 to 3.5 per cent in 1960. In 1970, the ratio declined slightly to 2.9 per cent. In St. Mary Parish, only 1.6 per cent of total parish employment was in this sector in 1940. By 1960, the ratio to total employment had risen to 7.2 per cent of the parish or 1,084 persons.[109] In 1970, 1,266 persons were in other transportation, but the ratio to total employment declined to 6.5 per cent. This decline may be indicative of the shift in the parish to more services during the 1960's.

More than 9.0 per cent of the total employment in Morgan City in 1970 was in barge transportation, lighterage, towing, supplying vessels and rigs, and similar activities. With the gradual decline of the fishing fleet, the development of offshore oil and gas, particularly of OCS oil and gas since farther distances must be traveled, is the only viable explanation of this high ratio of employment in "other" transportation.

Communications employment in St. Mary Parish steadily increased up to the present, when this sector's employment registered slightly less than 1.0 per cent of total parish employment. Morgan City had approximately the same share of employment in this industry as did the parish. On a statewide and nationwide basis, a higher ratio of persons were employed in communications.[110]

TABLE 18

DISTRIBUTION OF EMPLOYMENT BY INDUSTRY, 1970 (per cent)

Industry	U.S.	LA.	St. Mary	Morgan City
Agriculture	3.5	3.7	4.3	1.8
Forestry and Fisheries	.1	.4	1.5	
Mining	.8	3.9	12.1	11.6
Contract construction	5.8	8.1	7.7	5.7
Food and Kindred Products mfg.	1.9	2.0	2.0	.6
Textile Mill mfg.	1.3	.1	0	.1
Apparrel mfg.	1.6	.7	0	0
Lumber, wood products, furn. mfg.	1.3	1.5	.2	.1
Printing and Publishing mfg.	1.8	.8	.6	.9
Chemicals & allied products mfg.	1.3	2.2	2.9	.3
Electrical & other machinery mfg.	5.2	1.1	1.0	0
Motor vehicles & equip. mfg.	1.4	.1	0	0
Other transp. equip. mfg.	1.5	1.5	3.0	4.0
Other and miscellaneous mfg.	8.0	5.4	3.9	3.2
Railroads & railway express	.8	.7	.2	.1
Trucking and warehousing	1.4	1.2	1.6	2.1
Other transportation	1.5	2.9	6.5	9.0
Communications	1.4	1.3	.9	.9
Utilities & sanitary services	1.3	1.7	1.9	2.6
Wholesale trade	4.0	4.7	4.4	6.6
Food & dairy products stores	2.6	3.0	3.5	3.1
Eating & drinking places	3.2	3.0	3.9	4.3
Other retail trade	9.9	10.0	8.7	10.3
Finance, insurances & real estate	4.9	4.3	3.2	3.8
Hotels & other personal services	2.9	3.1	2.0	3.0
Private households	1.7	4.0	4.1	3.2
Business and repair services	3.0	2.9	4.0	5.6
Entertainment, recreation services	.8	.7	.9	.6
Medical, other professional services	17.1	17.5	11.6	11.9
Public administration	5.3	4.5	2.9	3.5
Armed services	2.5	3.1	.1	--
Industry not reported	6.0	7.0	7.6	--
TOTAL	100.0	100.0	100.0	100.0

Source: Table 17.

As population and urban families increased in the United States, greater needs developed for utilities and sanitary services. Most of the employment in this industry was concentrated in urban areas, and following this trend, Morgan City had a higher ratio of persons in employed in utilities and sanitary services to total employment than did St. Mary Parish, Louisiana, or the United States.[111]

Employment in wholesale trade increased by almost one million persons in the United States during the decade of the 1960's. This increase represented a 37 per cent increase above the 1960 employment in this industry. As a per cent of total employment, wholesale trade accounted for 4.0 per cent of the nation's employment in 1970. The national gain in wholesale trade employment from 1960 to 1970 represented an increase of 37.4 per cent; however, Louisiana's increase in the same category of industry was 45.7 per cent to 56,039 employees in 1970. These 56,039 workers in Louisiana's wholesale sector represented 4.7 per cent of total employment in the state.[112]

St. Mary Parish employment in wholesale trade establishments was 4.4 per cent of parish employment, an increase of one full percentage point in the ratio to total employment from 1960. In terms of the increase in total employees since 1960, there was an increase in wholesale trade employment of 71.7 per cent, a truly large gain.[113] This gain in St. Mary Parish was expected since the location of oil and gas field service firms in Morgan City and the environs required wholesale establishments to supply the goods needed for the provision of industry services. In 1970, Morgan City registered 6.6 per cent of its total employment in wholesale trade establishments, an indication of where the St. Mary Parish wholesale trade employment was concentrated.

With the increase in population in St. Mary Parish, primarily incoming workers, the growth of retail trade is an obvious development. In 1970, 16.1 per cent of total workers in St. Mary Parish were in some type of retail trade. Total employment in St. Mary Parish retail trade from 1960 through 1970 was 151.1 per cent. Similar growth in the United States was 76.7 per cent over the same period and in Louisiana, retail trade employment increased only 40 per cent from 1960 to 1970. Morgan City had a slightly higher ratio of retail trade employment to the city's total employment than did St. Mary Parish, 17.7 per cent.[114] It is difficult to determine exactly how much the location of the oil industry contributed to this growth of retail trade in St. Mary Parish and Morgan City, due to the fact that this sector's employment would have grown due to population growth, higher levels of affluence, and a general "trickling down" effect. Nevertheless, the shift-share analysis lends some tentative conclusions.

The growth in employment in finance, insurance, and real estate, provides some of the more startling evidence of the affluence of the 1960's in St. Mary Parish. The United States employed approximately 4.9 per cent of its total work force in this sector, or 3.8 million persons. In Louisiana, the ratio of employment in finance, insurance, and real estate, total employment was 4.3 per cent, only 0.6 per cent less than the national ratio. The ratio to total employment in St. Mary Parish was even less than the previous two,

3.2 per cent; however, the percentage increase in total workers in this sector in St. Mary Parish increased 205 per cent. The increase from 1960 to 1970 in the United States was 38 per cent and in Louisiana was 38 per cent also.[115]

Of the service categories of employment in the United States in 1970, medical and other professionals experienced the highest ratio of sector employment to total employment, 17.1 per cent. In Louisiana, 17.5 per cent of total employment was in the same industry. Approximately 12 per cent of St. Mary Parish and of Morgan City employment was in professional services. However, a higher ratio of employment in business and repair services was registered in St. Mary Parish and Morgan City than in the United States or than in Louisiana. Almost 6.0 per cent of Morgan City's employment was in business and repair services compared to only 3.0 per cent in the United States and 2.9 per cent in Louisiana for 1970. Overall, service employment in St. Mary Parish did not grow as quickly as in the country, 37.6 per cent compared to 42.7 per cent. However, business and repair service employment in St. Mary Parish increased 104.4 per cent during the 1960's while the nation's employment in the same category increased 43.2 per cent from 1960 to 1970.[116] In general, there had to have been a demand for business and repair services for employment to increase so dramatically in St. Mary Parish. The growth of certain occupations confirms that there was a need for the specialized services of repairmen in the areas of electrical work, mechanics who specialized in diesel engines, hydraulic mechanisms, and independent welders.

An examination of the shift-share analysis which follows reveals patterns in employment in St. Mary Parish and Morgan City during the decade of the 1960's which are relatively similar to those of the period 1950-1960. However, there are some very obvious differences in the components of employment growth in the two decades. Louisiana's overall growth in employment indicates that the state's employment growth was faster than that of the United States. The net relative change is the best measure of this overall growth due to strictly regional influences and how the state adapted to industrial needs. The individual components of this employment growth illustrate varied developments. Within the state, employment growth in mining of 11,663 persons was due to the regional share; however, the net relative change was only 2,332 because of the industrial mix component. While there are some obvious differential advantages to mining employment in Louisiana, the changes in technology and consumer preferences apparently adversely affected the growth of this sector's employment.

The same factors affecting the state's relative change in mining employment likely adversely affected employment growth in St. Mary Parish and Morgan City. While the St. Mary Parish retained a strong regional share component of employment growth in mining, the net relative change was only 109 persons, due mainly to the negative industrial-mix component. Similar occurrences in Morgan City over the period 1960-1970 caused the net relative change in mining to be negative. Part of the cause of this negative net relative change in Morgan City may have been the discovery of offshore oil and gas fields in other parts of the country, namely Texas. Since the Gulf of Mexico region immediately south of Morgan City was the

TABLE 19

COMPONENTS OF EMPLOYMENT CHANGE, LOUISIANA, 1960-70

Industry	National Growth	Industrial Mix	Regional Share	Net Relative Change
Agriculture	14,688	-42,128	-3,954	-46,082
Forestry and Fisheries	1,120	-960	-990	-1,950
Mining	7,229	-9,331	11,663	2,332
Contract construction	16,501	-4,695	474	-4,221
Food and Kindred Products, mfg.	6,204	-13,156	-1,001	-14,157
Textile Mill mfg.	151	-320	22	298
Apparrel mfg.	1,195	-961	1,924	963
Lumber, wood products, furn. mfg.	4,443	-2,668	-3,216	-5,884
Printing and Publishing mfg.	1,592	-139	-143	-282
Chemicals & allied products mfg.	3,637	-512	4,935	4,423
Electrical & other machinery mfg.	1,334	705	4,537	5,242
Motor vehicles & equip. mfg.	132	21	65	86
Other transp. equip. mfg.	1,417	-159	9,503	9,344
Other and miscellaneous mfg.	11,425	-6,628	1,948	-4,680
Railroads & railway express	2,554	-6,617	-224	-6,841
Trucking and warehousing	2,454	242	-555	-313
Other transportation	6,501	2,786	-7,510	-4,724
Communications	2,429	1,811	-16,405	-14,594
Utilities & sanitary services	3,782	-1,183	-928	-2,111
Wholesale trade	7,494	6,878	3,216	10,094
Food & dairy products stores	6,266	-1,008	-1,073	-2,081
Eating & drinking places	6,282	5,785	-8,100	-2,315
Other retail trade	20,447	3,577	-8,804	-5,227
Finance, insurances & real estate	7,232	6,833	185	7,018
Hotels & other personal services	6,983	-2,832	-2,716	-5,548
Private households	13,813	-3,836	1,574	-2,262
Business and repair services	4,797	5,833	-195	5,638
Entertainment, recreation services	1,468	143	-665	-522
Medical, other professional services	24,177	65,667	-3,416	62,251
Public administration	8,654	3,938	-3,387	551
Armed services	3,722	-795	15,610	14,815
Industry not reported	6,679	12,039	21,694	33,733
TOTAL	206,802	18,330	14,168	32,498

TABLE 20

COMPONENTS OF EMPLOYMENT CHANGE, ST. MARY PARISH, 1960-1970

Industry	National Growth	Industrial Mix	Regional Share	Net Relative Change
Agriculture	255	-721	2	-719
Forestry and Fisheries	67	-57	-61	-118
Mining	365	-472	581	109
Contract construction	212	-60	249	188
Food and Kindred Products mfg.	118	-252	-85	337
Textile Mill mfg.	2	-1	-2	3
Apparrel mfg.	0	0	0	0
Lumber, wood products, furn. mfg.	12	-16	-11	27
Printing and Publishing mfg.	21	-2	-2	4
Chemicals & allied products mfg.	81	-11	81	70
Electrical & other machinery mfg.	25	13	16	29
Motor vehicles & equip. mfg.	1	0	-5	5
Other transp. equip. mfg.	53	-6	259	253
Other and miscellaneous mfg.	81	-47	302	255
Railroads & railway express	16	-41	-8	49
Trucking and warehousing	22	2	170	172
Other transportation	211	91	-119	28
Communications	25	19	-3	16
Utilities & sanitary services	44	-14	120	106
Wholesale trade	98	90	172	262
Food & dairy products stores	92	85	136	221
Eating & drinking places	89	82	-414	332
Other retail trade	231	41	229	270
Finance, insurances & real estate	39	38	339	377
Hotels & other personal services	67	-27	5	22
Private households	213	-592	79	513
Business and repair services	75	91	235	326
Entertainment, recreation services	14	1	79	80
Medical, other professional services	251	1,858	25	1,883
Public administration	68	31	112	143
Armed services	1	0	17	17
Industry not reported	69	224	823	1,047
TOTAL	2,918	320	3,321	3,641

TABLE 21

COMPONENTS OF EMPLOYMENT CHANGE, MORGAN CITY, 1960-1970

Industry	National Growth	Industrial Mix	Regional Share	Net Relative Change
Agriculture	1	-3		
Forestry and Fisheries	25	-22		
Mining	111	-143	127	-16
Contract and construction	71	-20	-93	-113
Food and Kindred Products mfg.	17	-37	-35	-72
Textile Mill mfg.	0	0	0	0
Apparrel mfg.	0	0	0	0
Lumber, wood products, furn. mfg.	0	0	0	0
Printing and Publishing mfg.	7	-1	12	11
Chemicals & allied products mfg.	2	0	9	9
Electrical & other machinery mfg.	1	0	5	5
Motor vehicles & equip. mfg.	0	0	0	0
Other tansp. equip. mfg.	19	-2	112	110
Other and miscellaneous mfg.	27	-16	35	19
Railroads & railway express	3	-8	-8	-16
Trucking and warehousing	8	1	72	73
Other transportation	95	41	-107	-66
Communications	10	7	-7	0
Utilities & sanitary services	11	-3	85	82
Wholesale trade	40	35	105	140
Food & dairy products stores	33	-5	-23	-28
Eating & drinking places	42	38	-49	-11
Other retail trade	81	14	78	92
Finance, insurances & real estate	14	13	116	129
Hotels & other personal services	29	-12	-156	168
Private households	53	-146	5	-141
Business and repair services	34	42	70	112
Entertainment, recreation services	5	0	6	6
Medical, other professional services	76	206	13	219
Public administration	16	8	92	100
Armed services	--	--	--	--
Industry not reported	16	53	-153	100

first area in the country to be developed by the oil and gas industry, any discoveries of marginally more productive fields and areas may result in a negative industrial-mix component, even though a relatively strong regional share is still evident.

In the manufacture of other transportation equipment, Louisiana exhibited strong regional advantages in employment growth. St. Mary Parish shared in this employment growth to the extent that the parish's regional share was 259 persons compared to 53 persons due to national growth. The regional share of Morgan City's employment growth in other transportation manufacturing was 112 persons, many times more than the growth of this employment would have been had it relied only on national growth in this industry.

One sector which illustrated relatively strong growth in employment in St. Mary Parish was miscellaneous manufacturing. The net relative change of 255 persons was much larger than the growth due to national effects of 81 persons. However, the growth from 1960 through 1970 was less than that due to regional effects in the decade of the 1950's.

The transportation sector excluding railroads, trucking, and warehousing in St. Mary Parish and in Louisiana experienced negative net relative changes during the 1960-1970 period. In Morgan City, as well, there was a negative change in the employment growth component due to regional share. This development, while admittedly surprising, may be due to the physical limitations of St. Mary Parish and the relocation of transportation facilities in other parishes along Louisiana's coast; i.e., Houma, New Orleans, Golden Meadow, Grand Isle, Intracoastal City, and Lake Charles.

St. Mary Parish's increasing population during the decade of the 1960's resulted in an apparently equal increase in employment in the field of sanitation and utilities. Similarly, there were large gains in the employment growth of the retail trade sectors during the 1960's.

As indicated earlier, employment in finance, insurance, and real estate skyrocketed during the 1960's in St. Mary Parish and in Morgan City. The gains in this employment during the 1960-1970 period due to regional share were more than eight times larger than in the 1950-1960 period. Similarly, the employment gains in the professional fields were very extensive in St. Mary Parish, Morgan City, and Louisiana during the 1960's. However, these gains, as exhibited in the relevant tables, were mostly due to the industrial-mix component.

The most obvious change that occurred during the 1960's in the area of occupation changes in the United States was the increase in professional and technical personnel. In 1970, 14.3 per cent of all working males were listed as professionals. This compares to only 4.0 per cent in 1960 employed as professionals. The gains in females' roles as professionals was not as great as that of males. In St. Mary Parish, the increase in professionals was from 1.6 per cent of males employed in 1960 to 10.1 per cent of the same group in 1970. Morgan City experienced similar increases, but in 1960, it had 3.3 per cent of its males working as professionals.[117] Therefore, the gains were not as great as in St. Mary Parish.

TABLE 22

DISTRIBUTION OF EMPLOYED PERSONS,
BY OCCUPATION, 1970
(per cent)

	United States			Louisiana			St. Mary			Morgan City		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Professional, Technical	14.8	14.3	15.7	14.8	13.9	17.4	11.9	10.1	16.2	12.3	11.2	14.8
Managers, except farm	8.3	11.2	3.6	7.7	9.0	4.2	11.3	14.1	4.3	15.6	20.0	5.2
Sales Workers	7.1	6.9	7.4	7.0	6.8	7.6	5.0	4.1	7.4	6.8	6.0	8.8
Clerical	18.0	7.6	34.9	19.8	15.6	31.6	12.7	4.8	31.9	14.8	6.5	34.4
Craftsmen, Foremen	13.9	21.2	1.8	11.1	14.5	1.4	16.4	22.2	1.9	14.2	19.2	2.2
Operatives, except Transport	13.7	13.6	13.9	9.7	10.9	6.3	14.1	18.3	3.6	11.6	15.2	3.2
Transport Operatives	3.9	5.9	.5	3.7	4.7	.6	4.5	6.0	.7	5.0	7.1	
Laborers, except farm	4.5	6.6	1.0	4.8	6.1	1.1	7.0	9.1	1.9	6.1	8.3	.8
Farmers & Farm Managers	1.9	2.8	.2	1.1	1.3	.2	.7	1.0	.1			
Farm Laborers	1.2	1.7	.5	1.5	1.8	.4	3.1	4.3	.2			
Service Workers	11.3	8.1	16.6	13.5	11.6	18.8	9.6	5.7	19.1	10.4	6.3	20.3
Private Household Workers	1.5	.1	3.9	5.6	3.8	10.5	3.8	.2	12.8	3.2	.1	10.5

Source: Bureau of the Census, 1970.

Most of the gains in the employment of sales workers were among females. Of the four geographical divisions discussed and compared in this paper, Morgan City employed the highest per cent of females in this group, 8.8 per cent in 1970. In 1960, only 1.2 per cent of the females in Morgan City were sales workers.[118] The growth of clerical occupations for females was approximately equal in all four geographical areas. Each had over 30 per cent of its respective females working in clerical positions.

A very interesting development surfaces in the examination of occupations in St. Mary Parish and Morgan City. In 1960, 9.9 per cent of St. Mary Parish males were craftsmen or foremen and 25.3 per cent of the males in Morgan City held similar positions. By 1970, St. Mary Parish's ratio of all males employed as craftsmen or foremen increased to 22.2 per cent and that in Morgan City declined to 19.2 per cent. In an equally interesting note, the median salary of this occupation in the parish was $8,101 while in Morgan City, the median salary for craftsmen and foremen in 1970 was $7,707.[119] It has been previously stated that Morgan City traditionally paid higher wages than did the St. Mary Parish for roughly equal occupations due to the location of the oil and gas industry. Perhaps by 1970, the location of these industry members had gradually spread into the Morgan City environs due to land availability and easier access to major thoroughfares. With the relocation of firms, jobs followed.

Occupations involving operating of equipment fell slightly in Morgan City as a per cent of total male's employed. However, in St. Mary Parish, the decline in males employed in this category was from 30.1 per cent in

TABLE 23

MEDIAN EARNINGS FOR MALES
BY OCCUPATION, 1970

	U.S.	LA.	St. Mary	Morgan City
Professionals, Managers	$10,965	$9,511	$8,899	$9,627
Craftsmen, Foremen	8,158	7,294	8,101	7,707
Operatives, including transportation	6,779	5,786	6,755	6,533
Laborers, except farm	4,647	3,714	3,947	4,387
Farmers & farm managers	4,835	3,907	6,727	--
Farm laborers	2,597	2,170	2,007	--

Source: U.S. Department of Commerce, Bureau of the Census, 1970.

1960 to 18.3 per cent in 1970. Some of this decline in operative occupations may have been due to the increased mechanization of sugar cane farming. Nevertheless, such displacement of labor is beneficial in the sense that it spurs a higher level of human capital development and in the long-run, greater potential for future economic growth.

One occupation which experienced a phenomenal gain in members over the period of 1960-1970 was in the managerial class. In 1960, only 0.8 per cent of St. Mary Parish males were managers not connected with farming operations. In Morgan City, no males were listed, which is probably a statistical discrepancy (less than 1.0 per cent may not have surfaced in the data collection procedures.) Nevertheless, 14.1 per cent of St. Mary Parish males were managers in 1970 and 20 per cent of Morgan City working males were in the same type of occupation.[120] Unfortunately, the median earnings of this occupation class in 1970 was listed with that of the professionals.

The per cent of those families earning less than $1,000 in 1970 decreased rather dramatically from those in the same group in 1960. Generally, the changes occurring in income distribution in the United States were also occurring in Louisiana and its parishes. However, Louisiana remained one of the poorest states. In 1970, 26 per cent of the families earning an income had an annual income of less than $6,000. Using the same income class in Louisiana, the per cent of those with an income less than $6,000 was 39.5 per cent. In St. Mary Parish, 35 per cent of the families had an income of less than $6,000, while Morgan City's percentage was 32.1 per cent. Therefore, the poverty situation in Morgan City was somewhat better than in St. Mary Parish and Louisiana; however, it was significantly worse than the nation as a whole.[121]

Almost 27 per cent of United States families' income was between $6,000 and $10,000 annually in 1970. In Louisiana, the per cent was 26.9 per cent, very close to that in the nation. St. Mary Parish registered 28.6 per cent of its families in this income range and Morgan City's percentage was 28.8 per cent.[122] These four percentage distributions are indicative of where the median income was in 1970 for each region. Over 46 per cent of United States families had an income in 1970 of more than $10,000. In Louisiana, the per cent was 33.6; in St. Mary Parish, 36.5 per cent; and in Morgan City, 39 per cent.[123] Once again, as in the 1960 census reports, Morgan City had a relatively more favorable distribution of income than either St. Mary Parish or Louisiana. From the standpoint of occupational structure, Morgan City may not have had the most desirable format (blue-collar versus white-collar). However, these blue-collar jobs were, on the whole, better paying than comparable white-collar positions elsewhere. Thus, the distribution of income in Morgan City appeared more desirable than in other regions of the state.

TABLE 24

DISTRIBUTION OF INCOME
1970

	U.S.	LA.	St. Mary	Morgan City
Less than $1,000	2.5	4.8	2.9	3.2
$1,000 - $1,999	3.4	6.9	5.9	4.9
$2,000 - $2,999	4.4	7.2	6.8	6.1
$3,000 - $3,999	4.9	7.0	6.1	5.4
$4,000 - $4,999	5.1	6.7	5.7	5.1
$5,000 - $5,999	5.7	6.9	7.6	7.4
$6,000 - $6,999	6.1	6.9	7.0	7.7
$7,000 - $7,999	6.7	6.9	6.9	6.0
$8,000 - $8,999	7.1	7.0	7.8	8.3
$9,000 - $9,999	6.8	6.1	6.9	6.8
$10,000 - $11,999	12.9	10.6	13.9	12.5
$12,000 - $14,999	13.7	10.2	10.9	12.2
$15,000 - $24,999	16.0	9.9	9.5	11.4
$25,000 - $49,999	3.9	2.3	1.8	2.6
$50,000 - over	.8	.6	.4	.3
Median Income	$9,590	$7,530	$8,146	$8,496

Source: U.S. Bureau of the Census, 1970.

SUMMARY

From 1940 to 1970, total employment in St. Mary Parish increased by more than 9,000 workers. These 9,000 additional workers represented an increase of 89.4 per cent. Over the same period, Louisiana's total employment increased 56.2 per cent and that of the United States was 74.8 per cent. Morgan City's total employment growth from 1960 to 1970 was 30.3 per cent compared to 19.5 per cent in the nation, 17.3 per cent in Louisiana, and 32.2 per cent in St. Mary Parish.

By far the largest national increase in sector employment was in services, 221.1 per cent between 1940 and 1970. In Louisiana, this sector's employment increased 113 per cent and the gain in St. Mary Parish was 173.4 per cent. In Morgan City, service sector employment increased 38 per cent over the years 1960-1970, while in St. Mary Parish, the gain over the same period was 37.6 per cent. Louisiana's ten-year increase in service employment was slightly less, 29 per cent, while that of the nation was 43 per cent.

Nationally, the next sector to exhibit the largest increases in employment was that of finance, insurance, and real estate (FIRE). The gain in the United States was 158.6 per cent over the relevant thirty-year period.

In Louisiana, the 240 per cent increase in the FIRE sector was the largest of the sectoral employment increases from 1940 to 1970. A 665 per cent increase in St. Mary Parish was likewise the largest increase in St. Mary Parish sectoral employment gains. Much of the employment increase in the FIRE sector of St. Mary Parish occurred during the 1960's.

Following finance, insurance, and real estate, the sector employing persons in construction next illustrated the largest gains over the years 1940 to 1970. Nationally, employment in contract construction increased 117.4 per cent; however, in Louisiana, the employment gain in the same sector was over 173 per cent, and in St. Mary Parish, employed persons in contract construction rose only 121.5 per cent. The Bureau of the Census reported a slight decline in contract construction employment in Morgan City--366 persons in 1960 and 324 in 1970. A number of factors may account for the small proportion of Morgan City employment in contract construction as well as the relatively slow growth of this sector.

Other than Franklin and Morgan City, St. Mary Parish is mostly farmland and marsh. Despite its increase in population, St. Mary did not lose farmland over the years 1934 through 1970. The affinity of sugar cane to St. Mary Parish makes the crop a very valuable source of income in the area.

Secondly, much of the parish is hemmed in by wetlands, marsh, and swamp. Its direct uses for local housing are extremely limited. This is particularly true of Morgan City which is surrounded by water and marsh for all practical purposes. Therefore, not only is contract construction difficult, but land is limited.

Lastly, contract construction in St. Mary Parish may have grown more slowly due to competition from metal fabrication and oil field work. Skilled carpenters and bricklayers would probably not leave contract construction to enter fabrication or the oil and gas industry. However, unskilled helpers would change industry of employment for higher paying positions, even though their level of skill had not changed.

Employment in wholesale and retail trade in the United States increased 103.2 per cent from 1940 to 1970. In Louisiana, the increase in employment was 118.7 per cent and 243 per cent in St. Mary Parish. In Morgan City alone, employment in wholesale and retail trade increased by more than 300 per cent over the years 1960-1970. Comparable gains in the United States were on the order of 27 per cent; 20 per cent in Louisiana, and 52 per cent in St. Mary Parish.

Manufacturing in the United States has, of course, been a prominent source of employment during the years covered in this study. The stage of development in the country was such that the gains in employment realized from 1940 through 1970 were 86.4 per cent, certainly not the highest of the sectors examined. Louisiana has traditionally not had a high degree of manufacturing employment and St. Mary Parish increased its employment in this sector over the years 1940-1970 by only 63 per cent. The manufacturing

sector had the smallest gain in sector employment over the relevant 30 years.

On the other hand, employment in transportation, communication, and public utilities in St. Mary Parish increased 412 per cent from 1940 to 1970. The growth of employment in communication and public utilities is consistent with increased economic activity and population growth. However, much of the overall sector's increase in employment originated with transportation. Most of this transportation employment was in water transportation, a necessity for offshore mineral exploration and production.

Nationally, the mining sector's employment from 1940 to 1970 lost employees by 32 per cent. In Louisiana, mining employment as a per cent of total employment increased from 1.9 per cent in 1940 to 3.9 per cent in 1970. The increase in absolute numbers was 212 per cent, an increase of 31,710 employees from 1940 to 1970. In St. Mary Parish, the ratio of mining employment to total employment increased from 4.3 per cent in 1940 to 12.1 per cent in 1970. This sector's employment increased 438.2 per cent over the relevant 30 years.

Since 1950, mining employment in St. Mary Parish rose 111 per cent. Between 1940 and 1950, this employment increased 154 per cent. In 1940, only 437 persons were employed in St. Mary Parish's mining sector; by 1970, this figure had increased to 2,352, a 438 per cent increase. In Louisiana, mining employment increased 212 per cent over the relevant 30 years, but in the United States, there was a decline of 31.9 per cent.

Between 1960 and 1974, employees in the oil and gas field services industry increased by 50.7 per cent in Louisiana and 230 per cent in St. Mary Parish. Similarly, employment in local water transportation in Louisiana increased 110 per cent and in St. Mary Parish, the increase was 87 per cent.

In 1960, 553 offshore wells were completed; but in 1972, 721 were completed. The peak year, 1968, saw 1,474 wells completed. The OCS well completions have declined as a percentage of total Louisiana offshore wells. However, a more complete influence of OCS activities on Morgan City and St. Mary Parish emerges when one examines the production trends.

In 1954, 21 per cent of total Louisiana offshore oil production originated in the OCS region. By 1960, OCS oil production was 56 per cent of total offshore production. In 1972, 86 per cent of Louisiana's offshore production originated beyond the three-mile limit.

The production of OCS natural gas and casinghead gas was not as sharply upward as that of oil. In 1954, 69 per cent of total Louisiana offshore gas produced came from the OCS areas; in 1960, the OCS share declined to 67 per cent; however, in 1972, OCS gas produced off the Louisiana coast was 83 per cent of total Louisiana offshore gas production.

While it is impossible to determine with any degree of accuracy the exact employment and income impact exerted on Morgan City and St. Mary Parish by OCS oil and gas activities, it is obvious that an extensive portion of the present employment in Morgan City would not exist were OCS activities not present in the Gulf of Mexico.

The importance of mining in the Morgan City and St. Mary Parish economies is illustrated in the shift-share analysis examined earlier. In the decade of the 1940's, agriculture exhibited the strongest contribution to employment due to national growth. Food and kindred products manufacturing also illustrated a relatively strong national growth effect. Employment growth due to industrial mix was strongest in contract construction, yet it accounted for an increase of only 268 employees. The regional share component was largest in mining representing a positive change of 668 persons in St. Mary Parish from 1940 to 1950. Forestry and fisheries accounted for a change in the regional share component of 176 persons while the retail trade sector had a change of employment due to regional advantages of 171.

In the 1950-1960 decade, most of the employment change in St. Mary Parish due to national growth was in the agriculture sector. However, substantial changes occurred in forestry and fisheries (124), mining (171), contract construction (133), and food and kindred products (141). The largest contribution of the regional share components was mining, a change of 1,077 workers. Chemicals manufacturing and miscellaneous manufacturing (including steel fabrication) accounted for regional share changes of more than 300 persons. Other transportation had the second largest regional change in the 1950-1960 period, 704 employees.

Changes in employment growth due to national growth in the 1960-1970 decade in St. Mary Parish were concentrated in mining (365), contract construction (212), other transportation (211), other retail trade (231), and professional services (251). St. Mary Parish's regional share employment change in mining was 581, half of what it was in the 1950-1960 decade. Apparently, the employment changes due to the regional advantages became more diverse, spreading into manufacturing, trade, finance, insurance, and real estate, and business services. This occurrence is not surprising since mining and metal fabrication provided the economic base for Morgan City's and St. Mary Parish's growth. Subsequent development occurred in secondary and tertiary industries, providing for a somewhat more balanced industrial development in the region.

From the onset of offshore oil and gas development, the structure of occupations changed in St. Mary Parish and Morgan City. Only 6.1 per cent of employment persons in St. Mary Parish in 1950 were in professional occupations. By 1970, 12 per cent were professionals. In Morgan City, the per cent of professionals increased from 7.5 per cent in 1950 to 12.3 per cent in 1970.

In 1950, 13.2 per cent of Morgan City's employed persons were managers compared to only 9.1 per cent in St. Mary Parish. By 1970, these per cents

had changed to 15.6 per cent in Morgan City and 11.3 per cent in St. Mary Parish. Interestingly, this managerial occupation declined as a per cent of the total in the United States from 1950 to 1970.

There was a larger gain among craftsmen in the parish than in Morgan City. In 1950, 11.0 per cent of St. Mary's employed persons were craftsmen compared to 13.0 per cent in Morgan City. By 1970, 16.1 per cent of St. Mary Parish's employees were craftsmen while only 14.8 per cent were so classified in Morgan City. A related industry is that of operatives of machinery and transportation equipment. In 1950, 19.1 per cent of St. Mary Parish employed persons were operatives, compared to 18.6 per cent in 1970. Meanwhile, operatives were 25.4 per cent of employed persons in Morgan City in 1950, but this category declined to 16.6 per cent in 1970. It is suspected that much of these changes in occupations in St. Mary Parish and Morgan City resulted from the changes in employment due to national growth. However, as the area advanced industrially, mostly due to the regional advantages outlined above, wages and salaries changed. The resulting changes in the demand and supply relationships for labor and various levels of skill competency, the labor force in St. Mary Parish and Morgan City adapted to meet these changes.

A recent survey of 66 oil and gas-related firms yielded some interesting information on occupations in the Morgan City area. The 66 firms employed 8,536 persons with a total annual payroll in 1976 of $94.5 million. Thirty-six per cent of the employees were in fabricated steel products, 18 per cent were in offshore transportation, 11 per cent in contract drilling, and 9.5 per cent were in production operations. The remaining employees were in survey work, drilling mud, pipelines, machinery and equipment, towing services, industrial supplies, and electronics.

The greatest concentration of nonwhite employees was in fabricated steel products. Overall, 16.0 per cent of the 8,536 employees included were nonwhite. Twenty-eight per cent of the welders in fabricated steel were nonwhite and 36.7 per cent of the fitters were also nonwhite. Salaries for all welders and fitters ranged from $7,000 to $15,000 annually. Of all the non-office personnel in fabricated steel in Morgan City, only supervisors earned more than welders and fitters.

The three industries which seemed to have the highest upper limits on salaries were production, contract drilling, and offshore transportation. The information received on educational training of employees was by and large incomplete. Information on training and skill for only 3,151 workers was returned. Of these, 19.4 per cent had on-the-job training and 17.5 per cent had vocational-technical school training. Most of these positions are skilled jobs requiring a formally learned skill or an acquired skill. Of course, these do not include those positions filled by college graduates who have skills learned in that environment.

Of the 8,536 employees in the 66 firms, residences were reported for 5,453 or 64 per cent. More than 44 per cent of these 5,453 employees lived in St. Mary Parish; 11.9 per cent were residing in Assumption Parish; 13.2

per cent in Lafourche Parish; and 13.4 per cent in Terrebonne Parish. More than 10.0 per cent of the 5,453 Morgan City workers resided outside of Louisiana. Overall, 83 per cent of the workers surveyed in Morgan City resided in St. Mary, Assumption, Terrebonne, or Lafourche parish.

The attraction of higher-paying jobs in the Morgan City area is evident by a close examination of the distribution of income. Slightly more than 14 per cent of Morgan City's workers in 1970 earned less than $3,000 per year. This percentage compares favorably with 15.6 per cent of St. Mary Parish's workers in the same income bracket and 19 per cent of total Louisiana workers. Similarly, Morgan City had fewer workers earning between $3,000 and $8,000 than either St. Mary Parish or Louisiana, but 3.0 per cent more than the national percentage in the same income category. In the upper income brackets, Morgan City had a higher percentage than St. Mary or Louisiana, but somewhat less than did the nation.

In conclusion, the data presented in this analysis point to a city highly dependent upon offshore petroleum and gas activities. The extremely high concentration of directly and indirectly related firms in Morgan City is an obvious result of OCS activities. Most of the income and employment growth in this city would have not been possible without OCS activities. It would be naive to assume that negative externalities did not accompany Morgan City's economic growth. The resulting increase in population exerted pressures on available housing, public facilities, schools, and existing traffic arteries. At this writing, traffic congestion has been eased with the opening of a new bridge across the Atchafalaya River.

Strong dependence on OCS and offshore energy activities may appear to lead Morgan City to a somewhat precarious position in the 1980's. Should OCS activities cease, extremely critical economic losses would occur. Given the need for domestic petroleum, the relatively inelastic demand for petroleum and natural gas, the many alternative uses for crude oil, and the dependence on petroleum for transportation, it is unlikely that the Morgan City economy will suffer in the near-to-medium term.

FOOTNOTES

[1]Bureau of the Census, 1930.

[2]*Ibid*.

[3]*Ibid*.

[4]*Ibid*. Manufacturing in Morgan City and St. Mary Parish during later development would be concentrated in metal fabrication and boiler-works.

[5]*Ibid*.

[6]See footnote number 4.

[7]Cripps and Tarling, 1973.

[8]See Table 1.

[9]Cripps and Tarling, page 8.

[10]Bureau of the Census, 1930.

[11]Bureau of the Census, 1940.

[12]*Ibid*.

[13]See Table 2

[14]Department of Commerce and Bureau of the Census, 1940.

[15]*Ibid*.

[16]*Ibid*.

[17]*Ibid*.

[18]See Tables 1 and 2.

[19]See Table 4.

[20]Bureau of the Census, 1940.

[21]*Ibid*.

[22]*Ibid*.

[23]*Ibid*.

[24]An excellent account of the development of the South can be found in W.R. Schriver, 1971.

[25]Bureau of the Census, 1950, and Bureau of Economic Analysis, 1972.

[26]Bureau of Economic Analysis, 1972.

[27]*Ibid*.

[28]See Table 6.

[29]International Oil Scouts Association, 1950.

[30]U.S. Department of the Interior, 1975.

[31]*Ibid*.

[32]*Sales Management*.

[33]*County Business Patterns*, 1954.

[34]*Ibid*.

[35]Bureau of Economic Analysis, 1973.

[36]Bureau of Economic Analysis, 1972.

[37]*Ibid*.

[38]*Ibid*.

[39]Laurent and Hite, 1972.

[40]Schriver, 1971.

[41]Bureau of Economic Analysis, 1972.

[42]*Ibid*.

[43]*Ibid*.

[44]Bureau of the Census, 1950.

[45]Bureau of Economic Analysis, 1972.

[46]*Ibid*.

[47]Bureau of the Census, 1950.

[48]Ashby, 1964; Dunn, 1960; Houston, 1967; Hyclak, 1975.

[49]Hyclak, 1975.

[50]Bureau of the Census, 1950.

[51]*Ibid*.

[52]*Ibid*.

[53]*Ibid*.

[54]*Ibid*.

[55]*Ibid*.

[56]*Ibid*.

[57]See Table 10 for details.

[58]Bureau of the Census, 1950.

[59]*Ibid*.

[60]*Ibid*.

[61]*Sales Management*.

[62]Bureau of Economic Analysis, 1972.

[63]*Ibid*., Bureau of the Census, 1960.

[64]*County Business Patterns*.

[65]*Ibid*.

[66]Louisiana Department of Conservation and International Oil Scouts Association.

[67]Louisiana Department of Conservation.

[68]Bureau of Economic Analysis, 1972.

[69]Bureau of the Census, 1960.

[70]*Ibid*.

[71]*Ibid*.

[72]*Ibid*.

[73]*County Business Patterns*.

[74]Bureau of Economic Analysis, 1972.

[75]Bureau of the Census, 1960.

[76]Bureau of Economic Analysis, 1972.

[77]*Ibid.*, and Bureau of the Census, 1960.

[78]*County Business Patterns*.

[79]Bureau of Economic Analysis, 1972.

[80]*Ibid*.

[81]*Ibid*.

[82]*Ibid*.

[83]See Tables 13 and 14.

[84]See Table 15.

[85]Bureau of the Census, 1960.

[86]*Ibid*.

[87]*Ibid*.

[88]See Table 16.

[89]Bureau of Economic Analysis, 1972, and Bureau of the Census, 1970.

[90]*Sales Management*.

[91]Bureau of the Census, 1970.

[92]*Ibid*.

[93]Bureau of Economic Analysis, 1972, and *County Business Patterns*.

[94]*County Business Patterns*.

[95]*Ibid*.

[96]*Ibid*.

[97]Louisiana Department of Conservation and U.S. Department of the Interior.

[98]*Ibid*.

[99]*Ibid*.

[100] *Ibid*.

[101] Bureau of Economic Analysis, 1972.

[102] *Ibid*. and Table 17.

[103] *Ibid*.

[104] Bureau of the Census, 1970.

[105] See Table 17.

[106] *Ibid*.

[107] Bureau of Economic Analysis, 1972.

[108] Bureau of the Census, 1970.

[109] *Ibid*.

[110] See Table 18.

[111] *Ibid*.

[112] Bureau of Economic Analysis, 1972.

[113] *Ibid*.

[114] *Ibid*.

[115] *Ibid*.

[116] *Ibid*.

[117] Bureau of the Census, 1970.

[118] *Ibid*.

[119] *Ibid*.

[120] See Table 22.

[121] Bureau of the Census, 1970.

[122] *Ibid*.

[123] *Ibid*.

A P P E N D I X

LOUISIANA OCS WELL ACTIVITY

Year	New Wells	Completed	Oil	Gas	Dry, Failure, Abandoned
1954	5	5	3	2	
1955	145	89	58	31	44
1956	220	120	98	22	80
1957	313	176	133	43	99
1958	303	225	174	51	125
1959	276	208	162	46	71
1960	398	423	331	92	103
1961	444	461	337	124	102
1962	444	535	409	126	126
1963	536	516	421	95	208
1964	653	594	504	87	221
1965	765	420	537	87	273
1966	800	400	524	118	444
1967	828	339	444	96	335
1968	893	406	520	162	304
1969	764	358	448	118	362
1970	788	528	607	260	324
1971	780	375	357	236	522
1972	827	328	302	174	422
1973	764	409	299	279	472
1974	652	302	221	151	414

Source: Outer Continental Shelf Statistics, U.S. Department of Interior, Geological Survey, Conservation Division, Washington: June, 1975.

EMPLOYMENT IN SELECTED INDUSTRIES:
LOUISIANA AND ST. MARY PARISH,
1960-1974

Year	SIC #1310*		SIC #1380*		SIC #4450*		SIC #5080*	
	LA.	St. Mary	LA.	St. Mary	LA.	St. Mary	LA.	St. Mary
1960	18,840	1,408	20,231	713	4,916	752	11,107	85
1961	18,441	1,455	20,581	771	4,952	782	10,779	89
1962	18,680	1,396	20,609	682	5,513	832	11,273	153
1963	18,582	1,175	20,720	1,016	6,208	1,069	11,785	207
1964	18,705	1,050	23,254	1,114	6,885	1,236	12,374	296
1965	18,892	1,035	25,837	1,575	8,190	1,432	13,508	416
1966	19,191	991	26,873	2,414	8,871	1,470	14,460	549
1967	19,321	884	25,974	2,775	8,811	1,558	15,656	617
1968	19,540	914	25,775	2,887	9,169	1,822	15,932	395
1969	19,433	959	27,086	2,470	9,447	1,596	16,308	423
1970	19,342	891	25,716	2,070	9,560	1,686	17,216	467
1971	19,487	1,027	24,906	2,077	9,400	1,657	17,219	546
1972	20,741	886	26,729	2,582	10,171	1,706	18,371	589
1973	20,689	752	27,778	2,339	10,071	1,456	20,266	649
1974	20,869	714	30,484	2,349	10,338	1,403	21,914	776

*Monthly averages of each year.

Source: Louisiana Department of Employment Security.

Classification system is as follows: SIC #1310, Crude Petroleum and Natural Gas;
SIC #1380, Oil and Gas Field Services;
SIC #4450, Local Water Transportation;
SIC #5080, Machinery, Equipment, and Supplies.

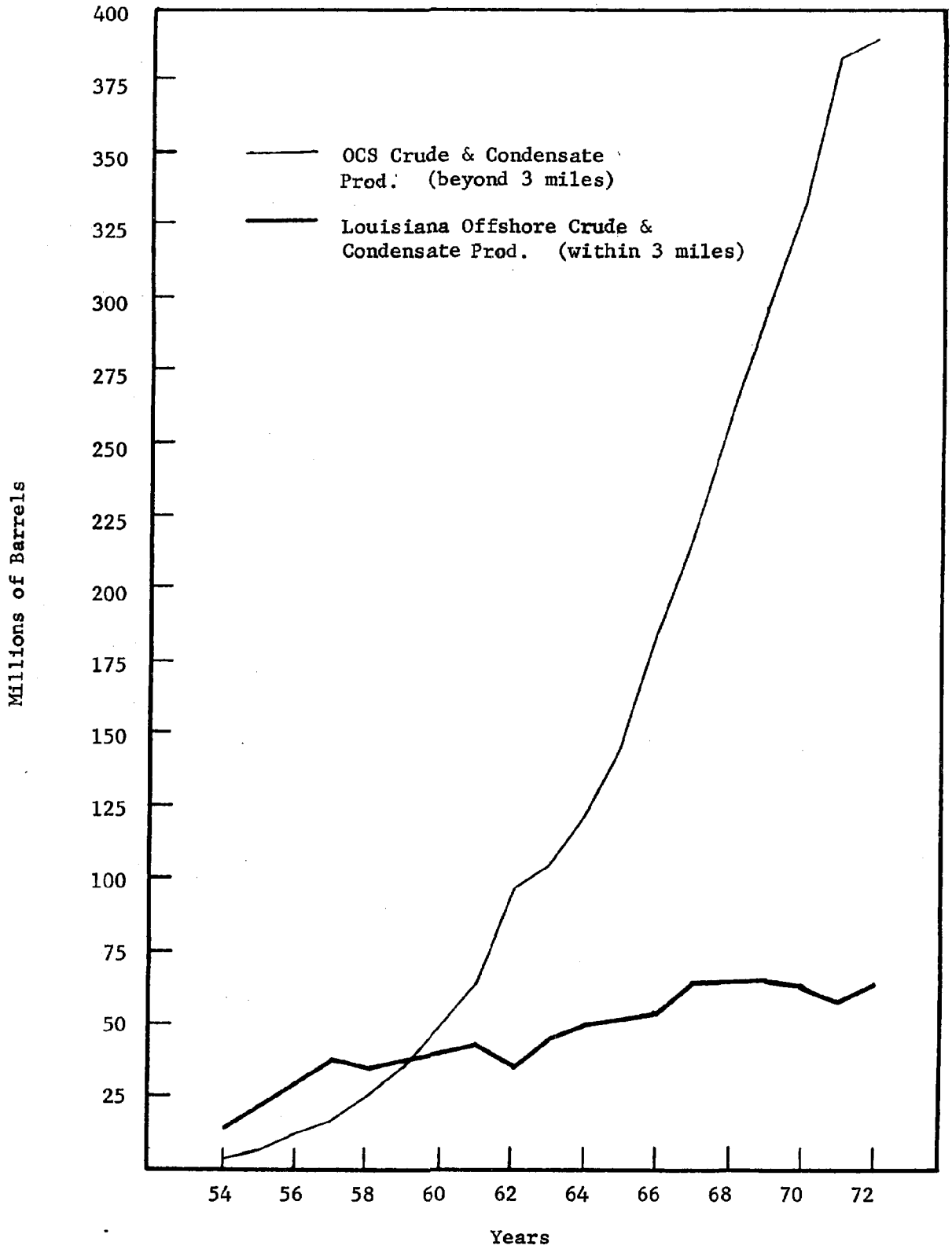
SELECTED STATISTICS ON OCS AND LOUISIANA
WELL COMPLETIONS AND OIL AND GAS PRODUCTION:
1954-1972

Year	Total Offshore Wells Completed	OCS Wells Completed	Oil Production*		Gas Production**	
			OCS	Within 3 Miles	OCS	Within 3 Miles
1954	44	5	3.344	12.582	56.114	25.211
1955	360	89	6.690	19.041	81.256	40.023
1956	464	120	11.044	29.862	83.281	53.245
1957	575	176	15.850	36.985	81.840	78.632
1958	400	225	24.673	32.708	128.681	105.286
1959	466	208	35.668	37.125	207.446	121.834
1960	553	423	49.348	38.774	273.619	134.769
1961	541	461	63.982	39.215	316.351	142.130
1962	604	535	90.028	36.773	453.038	135.323
1963	717	516	104.360	44.729	565.236	141.309
1964	783	594	123.333	50.376	618.944	164.530
1965	867	420	145.583	53.810	644.631	226.493
1966	1,007	400	187.171	55.909	962.083	303.816
1967	733	339	218.705	65.328	1,092.447	562.776
1968	1,474	406	263.937	65.985	1,419.530	637.761
1969	1,152	358	299.866	65.825	1,834.271	644.474
1970	1,194	528	334.637	63.741	2,268.084	532.020
1971	827	375	386.595	57.767	2,637.284	581.916
1972	721	328	389.222	63.362	2,888.716	592.116

*Includes both crude oil and condensate oil. In millions of barrels.
**Includes both natural gas and casinghead gas. In billion cubic feet.

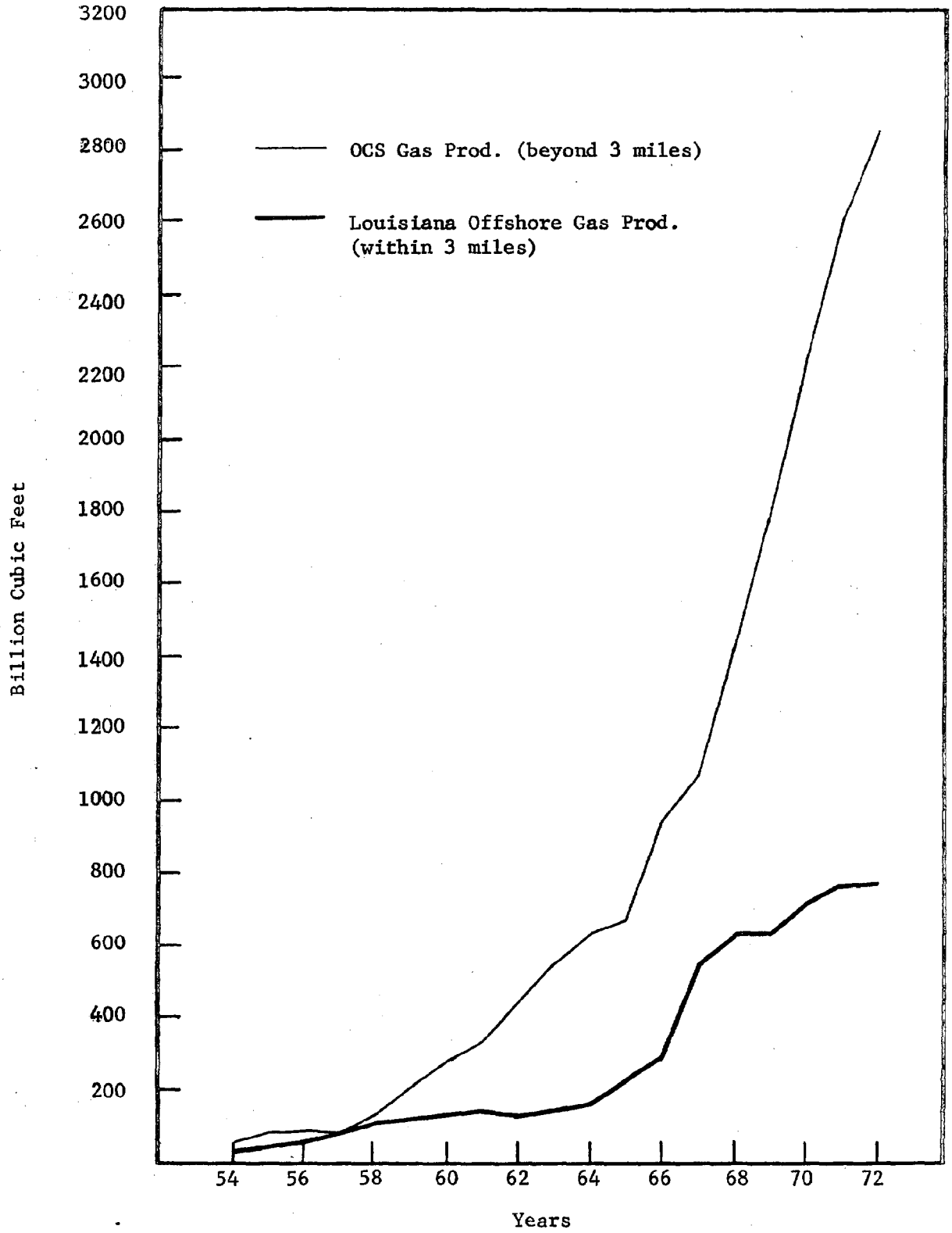
Source: U.S. Department of the Interior, Geological Survey, Conservation Division, Outer Continental Shelf Statistics, 1953-1974. Washington: U.S. Department of the Interior, June, 1975.

LOUISIANA OFFSHORE OIL PRODUCTION:
1954-1972



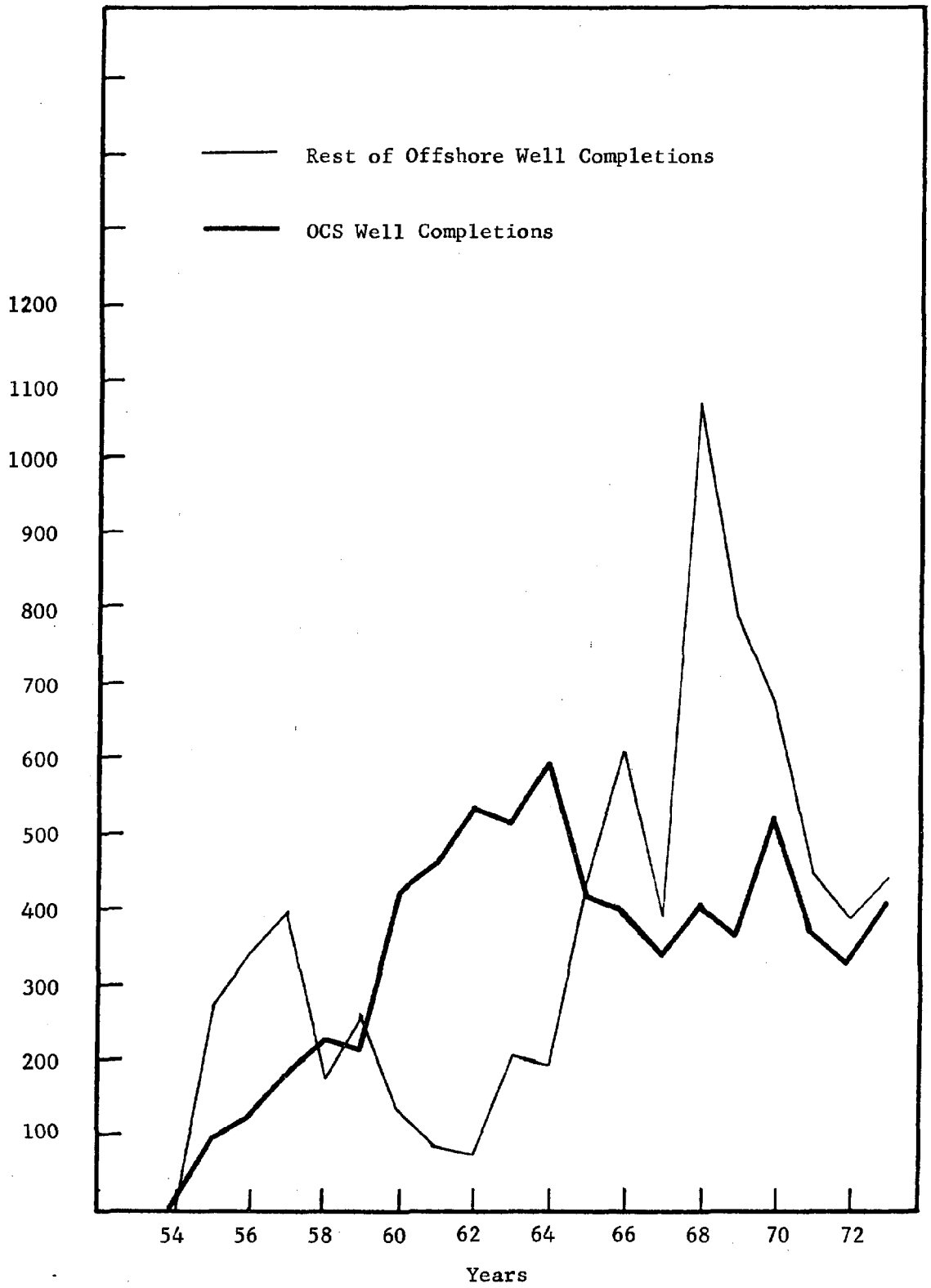
Source: U.S. Department of the Interior and Louisiana Department of Conservation.

LOUISIANA OFFSHORE GAS PRODUCTION:
1954-1972



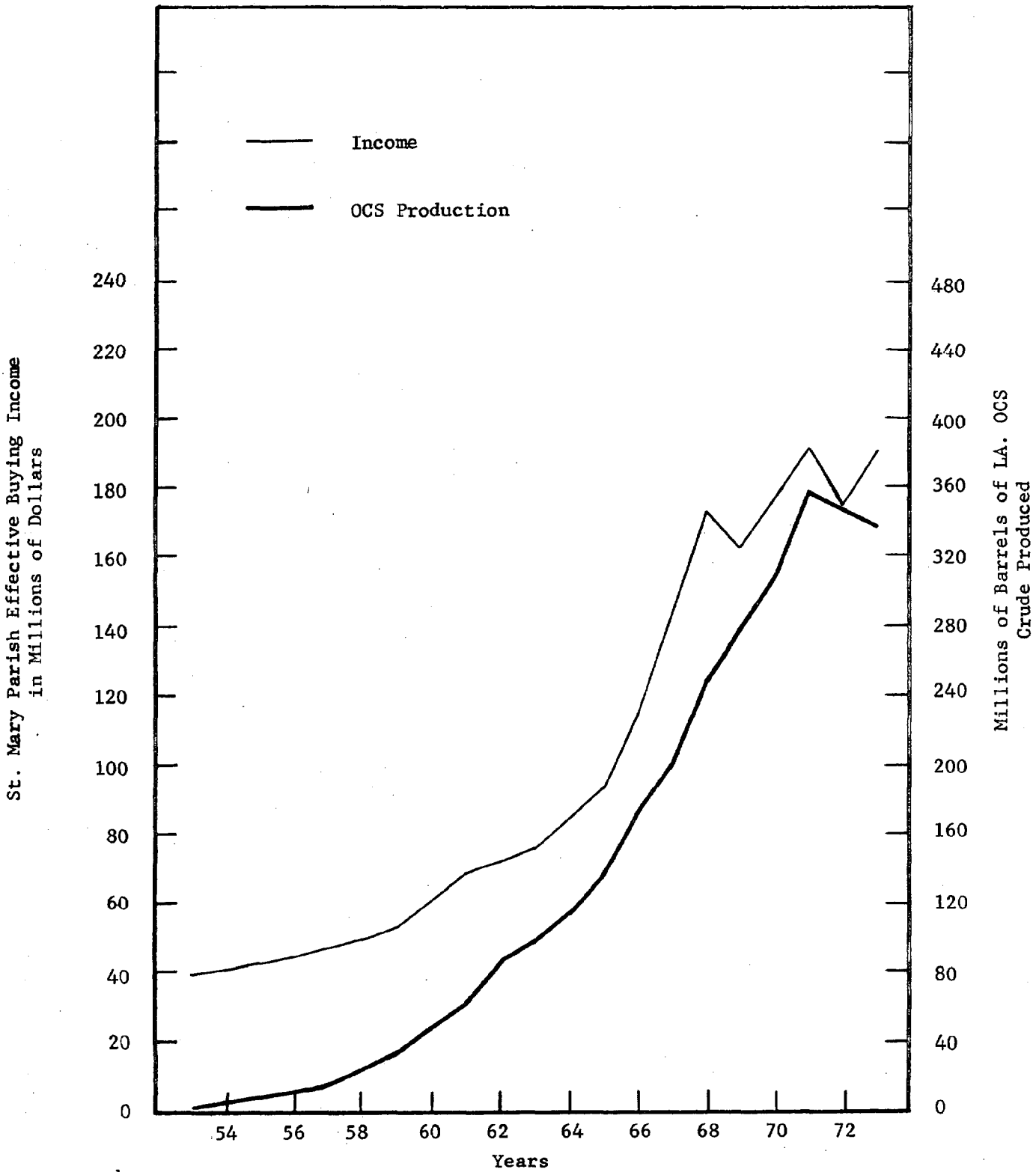
Source: U.S. Department of the Interior and Louisiana Department of Conservation.

OFFSHORE WELL COMPLETIONS,
LOUISIANA, 1954-1973



Source: International Oil Scouts Association.

LOUISIANA OCS OIL PRODUCTION AND
ST. MARY PARISH EFFECTIVE BUYING INCOME:
1953-1973



Source: Louisiana Department of Conservation; Sales Management.

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THE IMPACT OF OUTER CONTINENTAL SHELF PETROLEUM ACTIVITY ON SOCIAL AND CULTURAL CHARACTERISTICS OF MORGAN CITY, LOUISIANA

Bob Gramling, Jr.

Ed Joubert

THE IMPACT OF OUTER CONTINENTAL SHELF PETROLEUM ACTIVITY ON SOCIAL AND CULTURAL CHARACTERISTICS OF MORGAN CITY, LOUISIANA

Introduction

This section of the report is concerned with the effects of offshore oil drilling on the social and cultural characteristics of Morgan City and St. Mary Parish. Much of the data collected was only available at ten-year intervals, from sources such as the U.S. Bureau of the Census. In many cases the smallest unit for which data was available was St. Mary Parish. Where Parish data was utilized, attempts were made to draw conclusions that would be applicable to Morgan City. This portion of the report will contain five major subdivisions:

1. Demographic Characteristics
2. Educational Trends
3. Occupational Shifts
4. Health Services
5. Impact Assessment

Demographic Characteristics

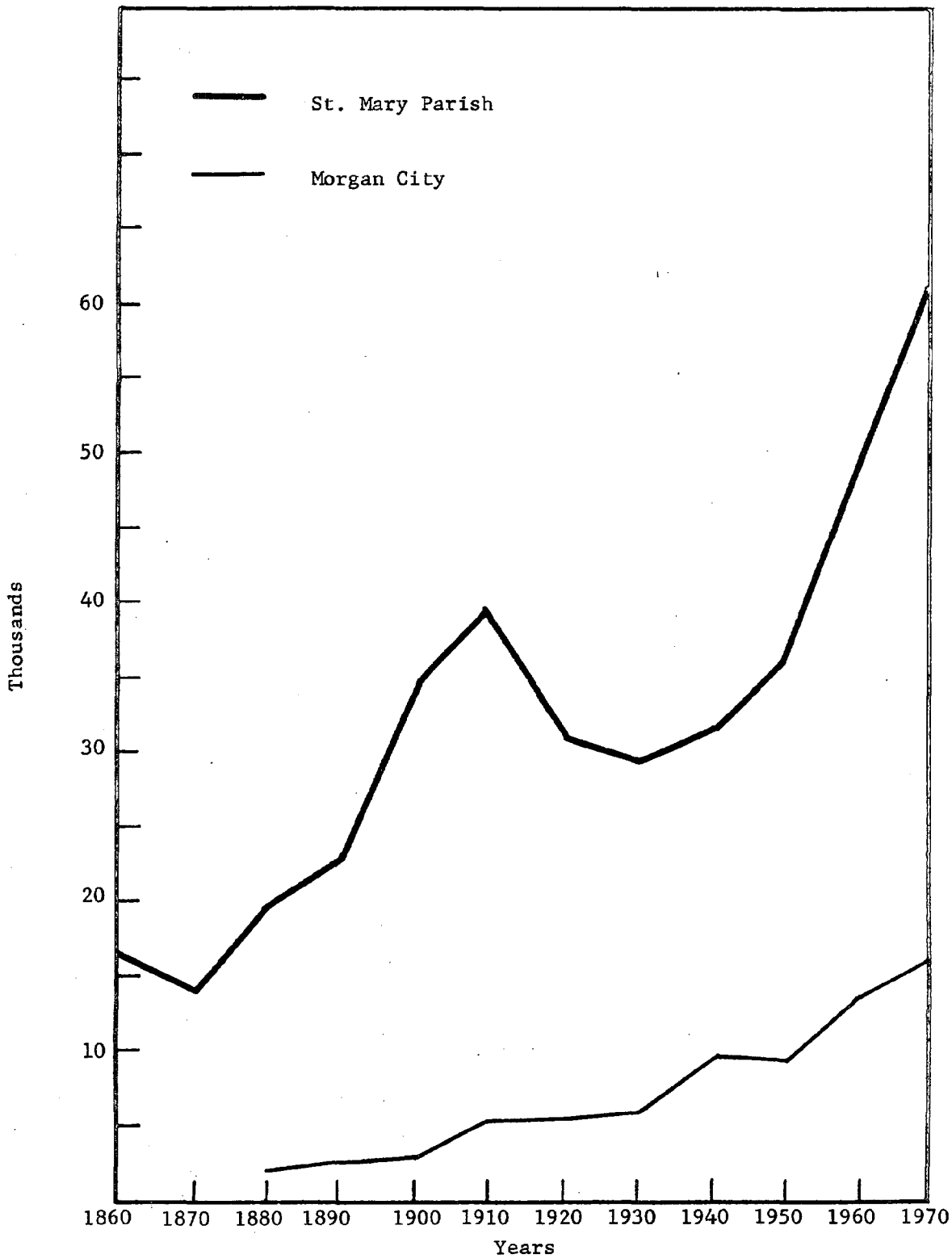
Total Population Change

The 1940 Census revealed that Morgan City had 6969 inhabitants (See Table S-1). A steady growth trend continued through 1970, at which time there were 16,586 people in Morgan City. During the same time period, St. Mary Parish increased from 31,458 to 60,752 residents. Two other neighboring urban areas in St. Mary Parish, Patterson, and Berwick experienced at least a three-fold increase. Patterson went from 1800 inhabitants in 1940 to 4409 in 1970. Berwick's population increased from 1906 in 1940 to 4168 in 1970. The growth in the Morgan City area resulted in the creation of an entirely new residential community, Bayou Vista, during the 1960's, which contained 5121 residents by 1970. For detailed figures concerning growth on an annual basis consult Table S-1 and Graphs S-1 and S-2.

Population growth can be associated with petroleum development by examining growth patterns prior to the onset of offshore drilling activities (1947). From 1900 to 1940, St. Mary Parish experienced fluctuations in population. The 1900 population was 34,147, while the 1940 population was 31,458, which was actually a slight decrease over the forty-year period. But from 1940 to the present, a steady growth pattern has emerged, culminating with a population of 60,752 residents in 1970.

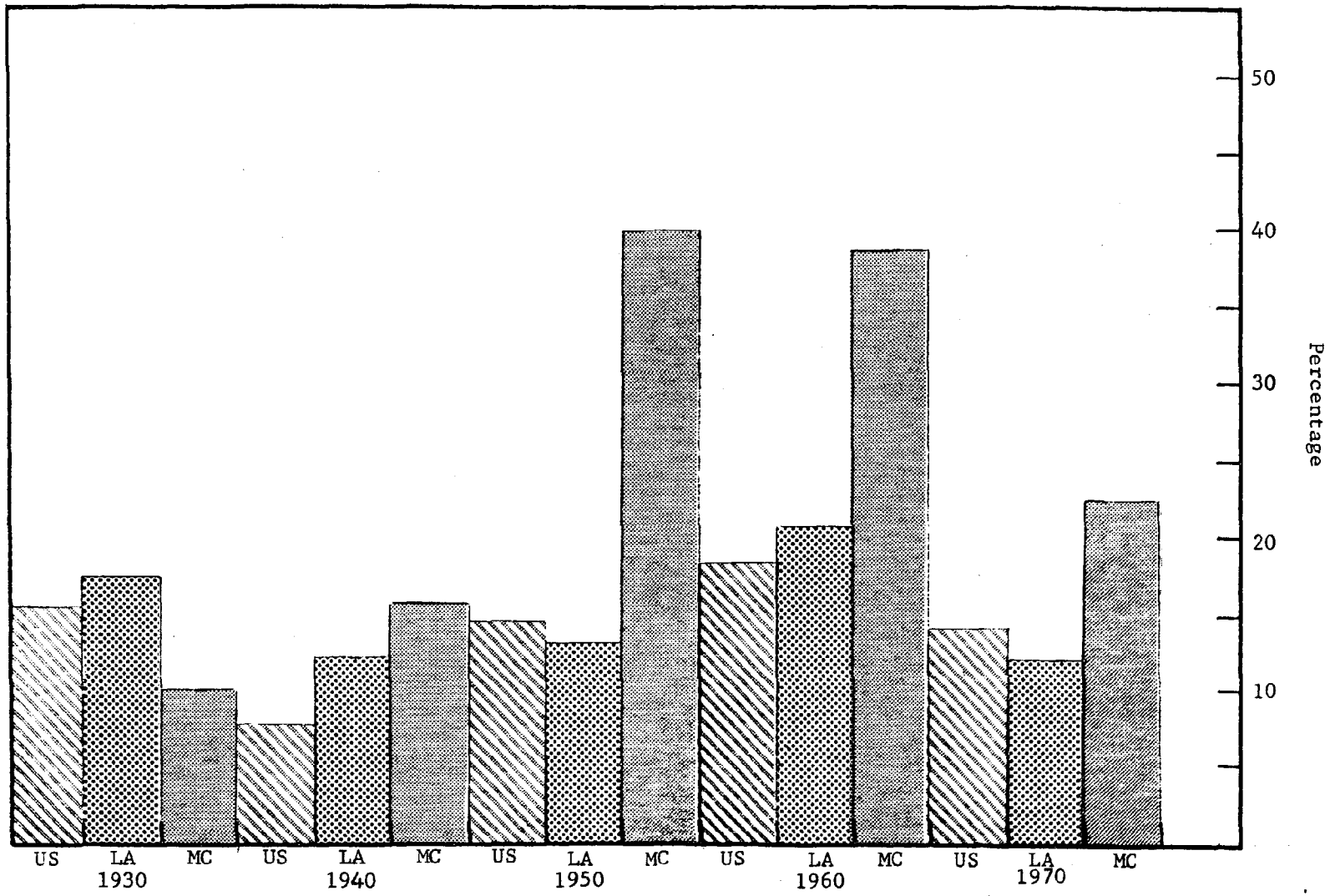
POPULATION GROWTH, MORGAN CITY, ST. MARY PARISH

GRAPH S-1



Source: Department of Commerce, Bureau of the Census.

PER CENT INCREASE, POPULATION, U.S., LOUISIANA, AND MORGAN CITY
GRAPH S-2



Source: Department of Commerce, Bureau of the Census.

TABLE S-1

GENERAL POPULATION TRENDS
NUMBER OF INHABITANTS

	Parish	Morgan City	Patterson	Berwick	Bayou Vista
1970	60,752	16,586	4,409	4,168	5,121
1960	48,883	13,520	2,923	3,880	
1950	35,848	9,759	1,938	2,619	
1940	31,458	6,969	1,800	1,906	
1930	29,397	5,985	2,206	1,679	
1920	30,754	5,429	2,538	1,691	
1910	39,368	5,447	2,998	2,183	
1900	34,145	2,332	NA		
1890	22,416	2,291	1,414		
1880	19,891	2,015	500		
1870	13,860				
1860	16,816				
1850	13,697				
1840	8,950				
1830	6,442				

Source: Louisiana Almanac. 1973-1974. Milburn Calhoun Publisher. Pelican Publishing Co. Gretna, La.

Rural to Urban Changes

As St. Mary Parish has grown in size, this growth has mainly occurred in urban areas, including Morgan City. From 1940 to 1970, there was relative stability in the size of the rural population. In 1940, rural residents numbered 20,215 people, while the corresponding figure for 1970 was 21,107, which is an increase of less than five per cent (See Table S-2).

The rural farm population decreased drastically from 9336 in 1940 to 792 in 1970, while the rural nonfarm population increased from 10,789 to 20,315 during the same time period. Much of the increase in rural nonfarm population has occurred in unincorporated places and is largely housed in single family dwelling units. One area where there has been considerable rural nonfarm growth from 1940 to the present is what is now known as Bayou Vista. Prior to its development in the 1960's, residents in this area would have shown up as rural nonfarm residents.

During this 30-year period, the urban population has steadily increased from 11,243 in 1940 to 39,609 in 1970, which represents an increase of 250 per cent. The actual percentage of people living in urban areas in 1940 was 35.7 per cent. By 1970 65.2 of St. Mary's inhabitants lived in urban areas.

TABLE S-2

RURAL AND URBAN POPULATION
ST. MARY PARISH 1940-1970

	1940	1950	1960	1970
Total Population	31,458	35,848	48,883	60,752
Rural Farm	9,336	6,231	1,242	792
Rural Nonfarm	10,879	11,095	18,575	20,315
Total Rural	20,215	17,236	19,817	21,107
Urban	11,243	18,522	29,016	39,609
Percent Rural	64.3	48.3	40.6	34.8
Percent Urban	35.7	51.7	59.4	65.2

Source: Statistical Profile of St. Mary Parish. Public Affairs Research Council, 1973.

Age and Sex Characteristics

Upon examination of the Census reports for the period 1940-1970, it became evident that the sex ratio is relatively stable for both St. Mary Parish and Morgan City. It has not undergone any major shifts in the last 40 years and there is no reason to believe that there will be major changes in this characteristic. Although the offshore workers are predominantly male, many of them do not reside in St. Mary Parish and may commute from various other parishes and even other states (See Tables S-3 - S-5).

With the exception of slight increases in the population aged 5-20 years, there have been no other noteworthy shifts in the age composition for St. Mary Parish and Morgan City in the recent past. Furthermore, the age distribution of St. Mary Parish is not significantly different from the state or the rest of the nation. There does not appear to be any kind of imbalance that could result in future problems such as a high dependency ratio, i.e., a disproportionate amount of people in the very old and very young categories.

Racial Composition

When one speaks of racial composition for St. Mary Parish and Morgan City, it mainly concerns the black, white ratio, since there is no major

TABLE S-3

AGE AND SEX FOR
ST. MARY PARISH
1940-1970

Age and Sex	1940	1950	1960	1970
Male	15,911	17,904	24,262	29,996
Under 5 years	1,773	2,407	3,762	3,678
5-9	1,576	2,169	3,144	3,999
10-14	1,706	1,860	2,644	3,718
15-19	1,703	1,363	2,024	2,909
20-24	1,470	1,303	1,538	2,058
25-29	1,370	1,301	1,546	2,236
30-34	1,123	1,130	1,656	1,946
35-39	1,076	1,216	1,490	1,578
40-44	845	1,063	1,313	1,686
45-49	748	1,024	1,291	1,419
50-54	641	725	1,016	1,229
55-59	588	605	874	1,112
60-64	467	508	600	859
65 and over	825	1,230	1,364	1,569
18 and over	NA	10,616	13,374	16,674
Female	15,547	17,944	24,571	30,756
Under 5 years	1,671	2,434	3,726	3,545
5-9	1,561	1,987	3,074	3,928
10-14	1,712	1,711	2,601	3,750
15-19	1,605	1,451	2,044	2,887
20-24	1,477	1,399	1,692	2,573
25-29	1,366	1,277	1,670	2,145
30-34	1,129	1,249	1,600	1,833
35-39	982	1,216	1,455	1,677
40-44	807	1,051	1,353	1,617
45-49	771	912	1,202	1,410
50-54	624	745	995	1,296
55-59	565	625	825	1,061
60-64	399	531	603	883
65 and over	879	1,356	1,731	2,151
18 and over	NA	10,931	13,858	17,663

Source: Statistical Profile of St. Mary Parish. Public Affairs Research Council, 1973.

TABLE S-4

AGE AND SEX FOR
MORGAN CITY
1940-1970

Age and Sex	1940	1950	1960	1970
Male	3,438	4,879	6,753	8,172
Under 5 years	366	632	1,040	1,018
5-9	339	590	826	968
10-14	356	456	684	938
15-19	356	368	572	803
20-24	311	405	447	594
25-29	302	428	512	642
30-34	288	347	489	529
35-39	257	356	453	443
40-44	188	301	352	490
45-49	177	291	367	427
50-54	134	204	283	366
55-59	115	142	250	303
60-64	93	116	174	223
65 and over	166	243	304	428
18 and over	NA	NA	3,835	4,725
Female	3,531	4,880	6,787	8,414
Under 5 years	351	681	977	924
5-9	324	511	790	1,007
10-14	357	433	696	950
15-19	367	380	575	777
20-24	357	426	546	781
25-29	319	400	486	586
30-34	299	375	506	530
35-39	232	326	406	456
40-44	201	298	371	485
45-49	177	262	327	413
50-54	136	214	296	368
55-59	147	167	243	287
60-64	80	110	187	270
65 and over	174	297	381	580
18 and over	NA	NA	3,958	5,028

Source: Statistical Profile of St. Mary Parish. Public Affairs Research Council, 1973.

TABLE S-5

AGE AND SEX PERCENTAGE
DISTRIBUTION, ST. MARY PARISH
1950, 1960, 1970

Age and Sex	1950	1960	1970
Male			
0 - 5	13.4	15.5	12.2
5 - 10	12.1	12.9	13.3
10 - 15	10.3	10.8	12.3
15 - 20	7.6	8.3	9.7
20 - 25	7.3	6.3	6.9
25 - 30	7.3	6.4	7.4
30 - 35	6.3	6.8	6.5
35 - 40	6.8	6.1	5.3
40 - 45	5.9	5.4	5.6
45 - 50	5.7	5.3	4.7
50 - 55	4.0	4.2	4.1
55 - 60	3.4	3.6	3.7
60 - 65	2.8	2.5	2.9
Over 65	6.9	5.6	5.2
Female			
0 - 5	13.6	15.3	11.5
5 - 10	11.1	12.5	12.8
10 - 15	9.5	10.5	12.2
15 - 20	8.1	8.3	9.4
20 - 25	7.8	6.9	8.4
25 - 30	7.1	6.8	7.0
30 - 35	7.0	6.5	5.6
35 - 40	6.8	5.9	5.5
40 - 45	5.9	5.5	5.3
45 - 50	5.1	4.9	4.6
50 - 55	4.2	4.0	4.2
55 - 60	3.5	3.4	3.3
60 - 65	3.0	2.5	2.9
Over 65	7.6	7.0	7.0

Source: Statistical Profile of St. Mary Parish.

concentration of other racial groups such as orientals, etc. On a parish-wide basis, the percentage of black inhabitants of St. Mary Parish has decreased from 45.3 per cent in 1940 down to 28.6 per cent in 1970 (See Table S-6 and Graph S-3). For Morgan City, the black to white ratio has always been lower. In 1940, blacks comprised 22.7 per cent of the total population of Morgan City. The comparable figures for 1950, 1960, and 1970 show a stable black concentration of about 16 per cent.

It is quite obvious that the white population of the parish is growing at a faster rate than the black population. Migration has played a greater role in the growth of the white population as opposed to the black population (See Segal et. al., 1976). Net migration for whites from 1950-1960 was +16.4, and from 1960-1970, +3.8. For Nonwhites (blacks) during the same period the corresponding figures were -9.6, and -4.1. Apparently, these trends can be tied to the petroleum industry. There seems to have been a large migration of whites from other areas outside the parish, who have found employment within the Parish, in oil-related pursuits. An unsuccessful attempt was made to document the differential employment of whites in the petroleum industry as opposed to blacks, but figures were not available by race. It would be safe to conclude that if these trends continue, St. Mary Parish, and Morgan City, will become increasingly white.

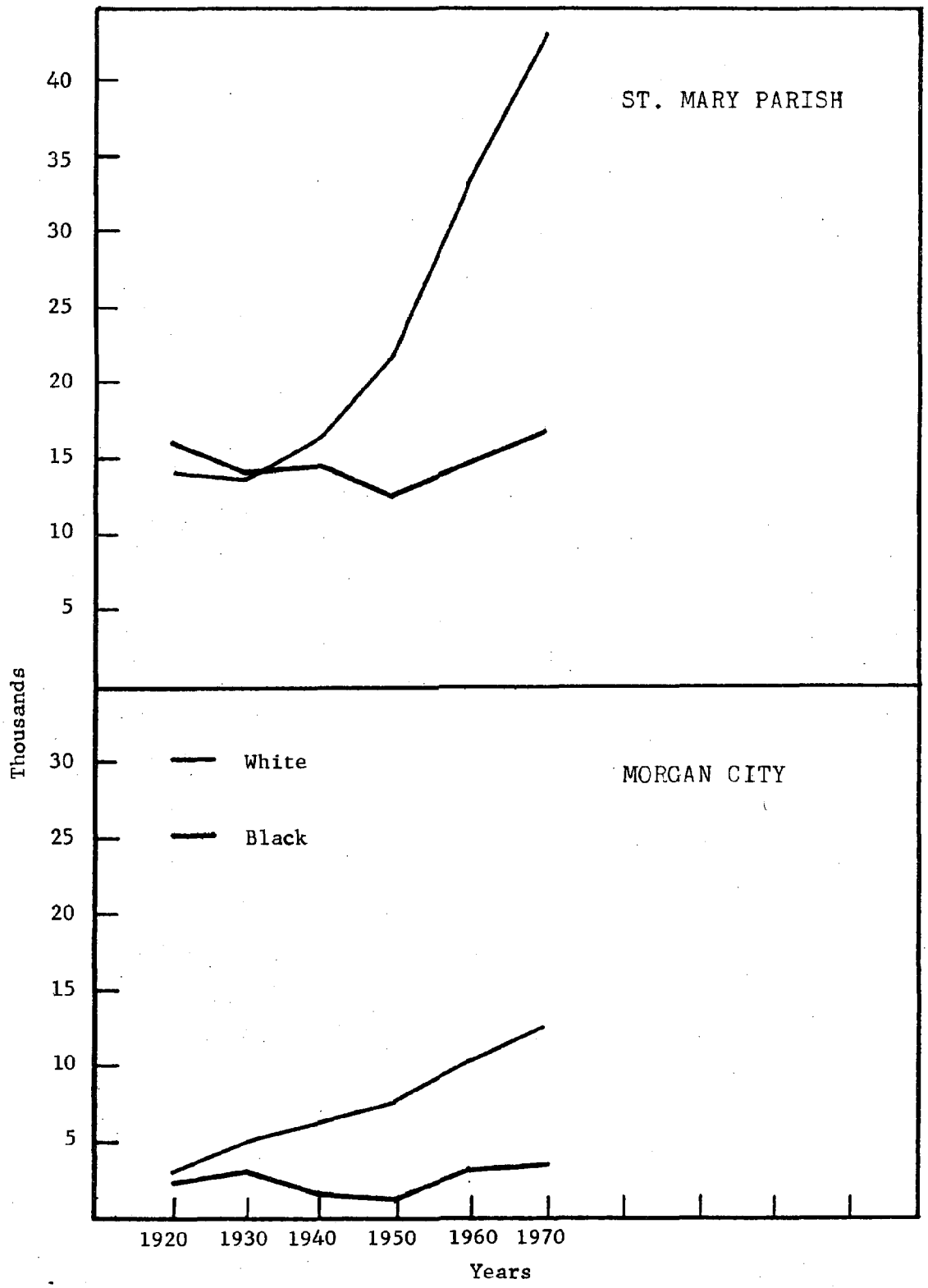
TABLE S-6

RACIAL COMPOSITION FOR ST. MARY PARISH AND MORGAN CITY

	1940	1950	1960	1970
St. Mary Parish				
Total	31,458	35,848	48,883	60,752
White	17,152(54.6%)	22,102(61.7%)	33,755(69.1%)	43,387(71.4%)
Nonwhite	12,306(45.3%)	13,746(38.3%)	15,078(30.9%)	17,356(28.6%)
Morgan City				
Total	6,969	9,759	13,540	16,586
White	4,383(77.3%)	8,155(83.6%)	11,379(84%)	13,933(84%)
Nonwhite	1,586(22.7%)	1,604(16.4%)	2,161(16%)	2,653(16%)

Source: U.S. Dept. of Commerce, Sixteenth Census of the United States, Volume II, Characteristics of the Population, 1940.
U.S. Dept. of Commerce, Seventeenth Census of the United States, Volume II, Characteristics of the Population, 1950.
U.S. Dept. of Commerce, Eighteenth Census of the United States, Volume II, Characteristics of the Population, 1960.
U.S. Dept. of Commerce, Nineteenth Census of the United States, Volume II, Characteristics of the Population, 1970.

RACIAL COMPOSITION, MORGAN CITY, ST. MARY PARISH
GRAPH S-3



Source: Department of Commerce, Bureau of the Census.

Projections

There have been several projections regarding the growth potential of both Morgan City and St. Mary Parish. The College of Business Administration of L.S.U. at New Orleans predicted that the population of Morgan City would increase to 55,000 in 1983, 61,600 in 1988 and 72,000 by 1993. By the year 2000 Morgan City would certainly be an SMSA of at least 80,000 people should these projections hold. Such projections are dependent upon constant trends in certain areas, such as continued increases in offshore oil and gas exploration and production with concomitant chemical and petrochemical activity. Increased facilities in water transportation, particularly the deepening of the Atchafalaya channel into the gulf and the widening and deepening of the intracoastal canal are also necessary. As these trends occur, shipbuilding and rig fabrication, as well as repair facilities should materialize. Finally, if these population projections are to become a reality, there must be a major increase in residential accommodations.

While Morgan City is experiencing this growth, the remainder of the parish should follow a similar growth pattern. Jones and Rice (1973) predict that by 1980 St. Mary Parish will have 73,953 inhabitants, increasing to 92,407 in 1990, and 113,049 in the year 2000. A third estimate would place the population of St. Mary Parish at 73,269 in 1980, 89,032 in 1990, and 97,277 in 1995 (See Planning Services, Inc., 1974). This is in line with the Jones and Rice projection. If the combined predictions occur, this would mean that in the year 2000 about 70 per cent of all St. Mary residents would live in Morgan City. The predictions would seem to imply drastic changes in the form of more urbanization, particularly for the city of Morgan City. But these trends are not likely to occur at the aforementioned level because it would necessitate the rest of the parish losing population to Morgan City.

Furthermore, offshore oil and gas production is apparently moving westward. In addition there are problems with the maintenance of adequate ship channels to Morgan City from the Gulf of Mexico. Available land for housing is scarce and largely dependent upon reclamation of wetlands. Finally, the precarious location of Morgan City at the base of the Atchafalaya Spillway coupled with the increased back pressure and concomitant increase in water levels as the Atchafalaya Bay silts in, makes it questionable that wetland reclamation will be a feasible alternative.

The use of a straight line projection, cohort survival method (as in the case of Jones and Rice, 1973), or modified cohort survival (used by Planning Services, Inc.) results in population projections of large increases in both St. Mary Parish and Morgan City. While these estimates may vary, all of them show Morgan City over 50,000 people and St. Mary Parish close to or over 100,000 by the turn of the century.

Segal et. al. (1976) shows three alternative projections for St. Mary Parish. The first projection uses the cohort survival technique and assumes migration rates identical with the recent past. This results in a projected

population for St. Mary Parish of 94,523 by the year 2000. This figure is in line with Jones and Rice (1973) and Planning Services, Inc. (1974).

A second projection is similar to the first, but it uses a zero migration rate which results in a lower projection of 88,446 people by the year 2000. The third projection in which the authors feel, "they can subjectively approximate future migration rates which will prove to be closer to the truth than the strictly mechanical rates" (Segal et. al., 1976), results in projections of constantly declining population from the present to the year 2000. The projection for the year 2000 is 54,799, considerably lower than the 1970 census figure of 60,752 for St. Mary Parish.

What Segal et. al. (1976) have apparently done is to use the census estimates (Current Population reports, p-26, N75-18) for Louisiana parishes for July 1974-1975 which shows an estimated population for St. Mary Parish of 60,600 in 1975. This is a .03 per cent decrease from 1970. Segal et. al. assumed, first, that this estimate or the 1973-74 estimate was accurate, and second, that the decline in population size would continue or actually accelerate. There is a potential source of error in the census estimate since it is an average of the three types of estimates, two of which rely heavily on school enrollment as an indicator of migration. Many migrants who work in the petroleum industry may have smaller families than the indigenous population, and consequently may tend to lower estimated migration rates. In addition, even if the population did decline from 1970 to 1975, the assumption that it will continue at the same or an increased rate over the next 25 years may well be faulty.

In conclusion, the authors of this report feel, using the same subjective techniques as Segal et. al. (1976), that most of the population projections for St. Mary Parish and Morgan City are too high given the problems of lack of land for housing and the transportation problems associated with the Atchafalaya River. It should be noted that hard data is only available by using techniques which assume continuing past trends such as simple extrapolation or cohort survival. However, a continued decline in population--if one in fact has occurred--is also felt to be unrealistic. It is not unreasonable to assume that the population of St. Mary Parish could surpass 75,000 and the population of Morgan City could exceed 25,000 by the turn of the century. This is especially true if some of the housing problems in Morgan City and St. Mary Parish are even partially alleviated.

Education

Academic Education

The state of Louisiana operates school districts on a parish-wide basis. As such, most of the empirical indicators of educational trends are not available for Morgan City on a separate basis. From 1940 to 1970, the median number of years of education completed by citizens of St. Mary Parish, 25 years of age and older, more than doubled. This figure rose from 4.7 to 9.9 years during the 30-year period in question (See Table S-7).

Although these changes could represent progress in education, it is noteworthy that in 1970, the state figure for median educational attainment was 10.8 years, while the national level was 12.1 years. Available data on Morgan City indicate that its citizens are slightly better educated than the rest of the residents of St. Mary Parish (See Table S-8). The major differences would appear at the secondary education level, i.e., the citizenry of Morgan City contains a slightly higher percentage of high school and college graduates.

Gains in educational attainment for St. Mary Parish and Morgan City have apparently followed a statewide trend over the last few decades and do not seem to be particularly associated with growth in the petroleum industry. A possible explanation for this is that many jobs in petroleum-related activities do not require particularly high educational levels, but rather specialized skills and/or on the job training.

What has changed with the growth of the oil industry is school attendance in St. Mary Parish, mainly because of the increased population. Thus, it might be said that increased activity in the oil-related sector has indirectly created new educational needs for St. Mary Parish. This has placed a greater burden on the parish to come up with adequate resources and physical facilities. Membership in public and private schools has increased steadily from 5819 (1940) to 7999 (1950) to 12,720 (1960), and 18,339 (1970) (See Table S-9). From 1940 to 1970, an average of about 13 per cent of the students attended private and parochial schools in the parish, leaving the remaining 87 per cent to be supported by the parish.

Public school membership in St. Mary Parish has increased at a faster rate than the state averages (See Table S-10). The decade 1950-1960 saw an increase of 68.4 per cent in membership in St. Mary Parish, while the comparable increase for the state of Louisiana was only 17 per cent. From 1960 to 1970, public school membership increased by 45.5 per cent while the increase in the state figure was 26.1 per cent.

The effects of a larger population attending school and the inflated costs of education can easily be appreciated by examining the figures in Table S-11, which shows changes in current operating expenses and cost per pupil for both St. Mary Parish and the State of Louisiana. The per cent increase in operating expenses has been significantly higher for St. Mary Parish than the Louisiana average in each of the periods covered. But the cost per pupil has not been that different from the state figure. Thus, it appears that while the budgets for operating expenses have gone up considerably, the actual amount of money spent of each student has not increased that drastically or, to put it another way, the quantity of inputs (in dollars) has had to increase to process more products (students) with no clear indication of increased concern for quality.

With the increase in both operating expenses and membership, there has been a corresponding increase in the value of school property in St. Mary Parish (See Table S-12). During the decades 1940-1950, and 1950-1960, the value of school property increased at a far greater rate in the parish

TABLE S-7

EDUCATIONAL TRENDS FOR ST. MARY PARISH

School Attendance	1940		1950		1960		1970	
	No.	%	No.	%	No.	%	No.	%
Persons 5-6 yrs. old	1,197		1,600		2,655		3,232	
No. attending school	374	31.2	610	38.1	1,340	50.5	1,774	54.9
Persons 7-13 yrs. old	4,659		5,340		7,913		10,803	
No. attending school	4,253	90.9	5,125	96.0	7,608	96.1	9,960	92.2
Persons 14-15 yrs. old	1,309		1,295		1,785		2,716	
No. attending school	1,031	78.8	1,105	85.3	1,665	93.3	2,493	91.8
Persons 16-17 yrs. old	1,343		1,095		1,760		2,441	
No. attending school	611	45.5	640	58.4	1,406	79.9	1,740	71.3
Persons 18-19 yrs. old	1,953		1,075		1,418		1,999	
No. attending school	220	11.3	205	19.1	607	42.8	614	30.7
Persons 20-24 yrs. old	2,329		2,640		3,230		4,631	
No. attending school	42	1.8	130	4.9	361	11.2	179	3.9

Years of School Completed, 25 Yrs. Old and Over	1940		1950		1960		1970	
	No.	%	No.	%	No.	%	No.	%
Total	15,204	100.0	18,080	100.0	22,496	100.0	27,644	100.0
No schooling	3,800	24.9	3,530	19.5	2,432	10.8	1,686	6.1
Grade school:								
1-4 yrs.	4,199	27.6	4,565	25.2	4,390	19.5	3,183	11.5
5-8 yrs.	3,956	26.0	4,965	27.5	6,369	28.3	7,449	27.0
High school:								
1-3 yrs.	1,364	9.0	1,795	9.9	3,304	14.7	5,014	18.1
4 yrs.	1,067	7.0	1,770	9.8	3,906	17.4	6,853	24.8
College:								
1-3 yrs.	443	3.5	660	3.7	1,101	4.9	1,859	6.7
4 or more yrs.	165	2.0	510	2.8	994	4.4	1,600	5.8
Not reported	27	.01	285	1.6	---	---	---	---

TABLE S-7 (continued)

Educational Attainment, 25 Yrs. Old and Over	Parish 1960	Parish 1970	Louisiana 1960	Louisiana 1970	United States 1960	United States 1970
% with no schooling	10.8	6.1	6.6	3.9	2.3	1.6
Rank*	47	47	49**	50		
% with less than 5 yrs. school	30.3	17.6	21.3	13.1	8.4	5.5
Rank*	38	39**	50	50		
% with at least 4 yrs. high school	26.7	37.3	32.3	42.3	41.1	52.3
Rank*	21	21	41**	41		
% with 4 yrs. or more college	4.4	5.8	6.7	9.1	7.7	10.7
Rank*	26**	26**	33**	35**		
Median yrs. of school completed	7.8	9.9	8.8	10.8	10.6	12.1
Rank*	34**	23**	46**	41**		

*Parish is ranked among the 64 parishes; Louisiana is ranked among the 50 states.
**Tied with another parish or with another state.

Source: Statistical Profile of St. Mary Parish. Public Affairs Research Council, 1973.

TABLE S-8

EDUCATIONAL TRENDS FOR MORGAN CITY

Years of School Completed, 25 Yrs. Old and Over	1940		1950		1960		1970	
	No.	%	No.	%	No.	%	No.	%
Total	3,485	100.0	4,930	100.0	6,329	100.0	7,864	100.0
No schooling	658	18.8	820	16.6	653	10.3	537	6.8
Grade school:								
1-4 yrs.	765	21.9	975	19.8	958	15.1	861	10.9
5-8 yrs.	1,168	33.5	1,515	30.7	1,900	30.0	2,036	25.9
High school:								
1-3 yrs.	333	9.6	575	11.7	887	14.0	1,163	14.8
4 yrs.	301	8.7	590	12.0	1,252	19.8	2,052	26.1
College:								
1-3 yrs.	137	3.9	205	4.2	377	6.0	602	7.7
4 or more yrs.	116	3.6	145	2.9	302	4.8	613	7.8
Not reported	7	.0	105	2.1	---	---	---	---

Source: Statistical Profile of St. Mary Parish. Public Affairs Research Council, 1973.

TABLE S-9

SCHOOL REGISTRATION IN ST. MARY PARISH

	Public School Registration	Private School Registration	Total
1940	5,819	*	*
1950	6,633	1,366	7,999
1960	11,175	1,545	12,720
1970	16,259	2,080	18,339

*Figures not available for private schools.

TABLE S-10

PER CENT INCREASES IN PUBLIC SCHOOL REGISTRATION

	St. Mary Parish	State of Louisiana
1940-1950	13.9	20.9
1950-1960	68.4	17.0
1960-1970	45.5	26.1

Sources: State Department of Education of Louisiana, Annual Report, 1940, 1950, 1960 and 1970.

TABLE S-11

EXPENSES FOR CURRENT OPERATION AND COST PER PUPIL

	St. Mary Parish				State of Louisiana			
	Current Operation	Per Cent Increase	Cost Per Pupil	Per Cent Increase	Current Operation	Per Cent Increase	Cost Per Pupil	Per Cent Increase
1940	$ 192,354		$ 53.59*		$ 21,661,699		$ 61.21*	
1950	$ 923,989	380	$144.52	170	$ 85,758,961	304	$177.01	189
1960	$2,926,534	217	$288.90	100	$207,738,350	143	$332.70	88
1970	$7,008,681	139	$464.66	61	$474,213,625	128	$578.35	74

*Reflects white schools only.

Source: State Department of Education of Louisiana, Annual Report, 1940, 1950, 1960, and 1970.

than in the state as a whole. From 1950-1960, the value of parish school property increased by 520 per cent. This could not be due to mere inflation or appreciation of land values alone.

TABLE S-12

VALUE OF SCHOOL PROPERTY

	St. Mary Parish		State of Louisiana	
	Value	Per Cent Increase	Value	Per Cent Increase
1940	517,644		72,614,586	
1950	1,233,356	138	139,860,697	93
1960	7,652,095	520	530,264,264	281
1970	12,260,644	60	948,439,784	79

Source: State Department of Education of Louisiana, Annual Report, 1940, 1950, 1960, and 1970.

But where is the money coming from to finance the above mentioned educational needs? All parishes have two sources of income which can be readily noted, revenue receipts and non-revenue receipts. While St. Mary Parish's school registration and operating expenses have increased at a faster rate than the state as a whole, revenue and non-revenue receipts for the parish have roughly paralleled the state rates, particularly from 1950 to 1970 (See Table S-13). From 1940 to 1950, total receipts for St. Mary Parish increased by 660 per cent while the comparable state increase was 227 per cent. But when the greatest pressure from increased membership was felt, 1950 to 1960, receipts did not increase at such a high rate. It is particularly noteworthy that revenue receipts almost tripled from 1960 to 1970 while non-revenue receipts stayed virtually the same.

One of the apparent reasons for the sharp increases in revenue receipts was relief from any sales tax. Beginning with the 1965-1966 school session until the present, St. Mary Parish has designated part of its sales tax for the support of education (See Table S-14). This is indicative of a statewide trend which occurred during the sixties when most parishes began to collect revenue from sales tax for educational purposes. Apparently local property assessments plus outside sources of income, such as federal funds, were not enough to keep the school system functioning properly. In the ten-year period covered in Table S-14, it should be pointed out that the sales tax receipts for education have been increasing sharply. In 1966, the collections from this source totaled $77,555.23, while in 1975,

TABLE S-13

RECEIPTS FOR EDUCATION

	St. Mary Parish				State of Louisiana			
	Revenue	Non-Revenue	Total	Per Cent Increase	Revenue	Non-Revenue	Total	Per Cent Increase
1940	227,719	37,710	266,430		26,713,849	9,074,499	35,788,348	
1950	1,027,121	832,212	2,023,860	660	101,844,655	30,753,893	132,598,548	227
1960	3,491,972	1,021,282	4,513,255	123	244,163,122	63,777,986	307,936,108	133
1970	8,469,503	1,213,858	9,683,361	114	556,680,986	71,715,685	628,396,672	105

Source: State Department of Education of Louisiana, Annual Report, 1940, 1950, 1960, and 1970.

TABLE S-14

SALES TAX APPLIED TO EDUCATION

	St. Mary Parish	State of Louisiana
1975*	854,013.47	117,565,894.27
1974	722,064.01	101,566,764.57
1973	598,685.26	88,422,871.27
1972	594,385.07	78,860,858.90
1971	587,575.85	70,170,805.55
1970	614,578.47	63,345,388.66
1969	529,729.74	53,032,724.70
1968	NA	43,822,085.03
1967	435,523.72	34,821,600.68
1966	77,555.23	

*1975 denotes collections for the 1974-1975 school session, 1974 is for the 1973-1974 session, etc.
Source: State Department of Education of Louisiana, Annual Report, 1966-1975 inclusive.

this total was $854,013.47. It would be expected that these monies would continue to increase as long as there is growth in population, which in turn would be dependent upon continued growth in the economic sector, particularly the petroleum industry.

Vocational Education

Young people desiring vocational training in the Morgan City-St. Mary Parish area have in the past had to commute to other parishes to obtain the training. The first local facilities for vocational training began when the Gulf Area Vocational-Technical School in Abbeville (Vermilion Parish) opened a branch in Morgan City. From 1959-1965, the vocational facilities were housed at various locations in Morgan City. Then in 1965, came a permanent vocational facility for the city. It was created by the Louisiana legislature and named Young Memorial Vocational-Technical School. The state of Louisiana recognized the need for a permanent, diverse training center in the St. Mary area.

A summary of the offerings at Young Memorial follows:

Health Occupations
- Practical Nursing (Post Secondary)
- Nurse Aide Training (Adult)

Office Occupations
- Typist-Clerk (Post Secondary)
- Clerical Receptionist (Post Secondary)
- Secretarial (Post Secondary)
- Accounting and Business Machines (Post Secondary)

Trade and Industrial
- Welding (Secondary, Post Secondary, Adult)
- Diesel Mechanics (Secondary, Post Secondary, Adult)
- Machine Shop (Secondary, Post Secondary)
- Drafting (Post Secondary, Adult)
- Electronics (Secondary, Post Secondary, Adult)
- Basic Electrical (Secondary, Post Secondary)
- Nautical Science (Secondary, Adult)

The curricula at Young Memorial is directly linked to the petroleum industry. This can be seen in the courses offered as well as in the material covered in particular courses. Welding, diesel mechanics, machine shop, drafting, electronics and nautical sciences are all crucial occupations to the oil industry. Several courses which have been modified to increase their applicability are welding and electronics.

The increased demand for welders in the Morgan City area means that many students leave school prior to completion of their program. Consequently, the welding program was recently redesigned as a modular curriculum with certification at each stage of advancement. Thus, the student can advance

to the desired level and then seek employment. Likewise, the electronics course is tailored almost entirely to radio communications and radar with no provisions for radio and television repair.

Because of high employment potential, graduation figures would not accurately reflect the reciprocal relationship between the development of vocational education and the oil industry. Current construction underway at Young Memorial will increase the training capabilities of the institution by about one-third. Most of this increase will be in petroleum-related areas, particularly welding (See Young Memorial, 1975). Table S-15 details the financial history of Young Memorial since its inception in 1965.

Future Educational Trends

Obviously future educational needs for Morgan City and St. Mary Parish are dependent upon demographic trends. Should the increase in oil exploration and production continue at present levels, there should be steady increases in population growth. It is reasonable to assume that the occupational structure will not be drastically altered. Thus, vocational training may become even more relevant. While a rise in public school membership can be anticipated, as well as corresponding increases in the median educational attainment, higher education in the form of college training should not undergo massive increases in the next few decades. Young people desiring to remain in St. Mary Parish may be aspiring toward more blue collar oriented occupations because of the obvious visibility of financial success from their older counterparts.

Medical Facilities

There are presently two hospitals located in the Morgan City area. Lakewood Hospital is located within the city limits of Morgan City, while Fairview Hospital is located in nearby Berwick. Lakewood Hospital is parish owned and was constructed in 1955 with a 46-bed capacity. It was expanded in 1961 to 88 beds, and in 1977 has 99 beds (See Kiene & Associates, 1974). Fairview is a smaller hospital with only 50 beds and no emergency facilities. Lakewood feels the impact of the oil industry because of its emergency facilities. Fairview mainly accommodates the overflow of regular patients from Lakewood so that the influence of the oil industry and related population growth is mainly indirect.

Although Lakewood has grown in recent years, its facilities can be described as grossly inadequate. Patients must be processed through the institution at a faster rate than might be desirable. The average stay in Lakewood is 4.6 days while the national average is 7.5 days (Footnote: James W. Hice, administrator). Studies indicate that Lakewood is presently serving an inpatient load equal to a 150-bed hospital and an outpatient load equal to a 200-bed hospital (See Kiene and Assoc.).

TABLE S-15

FINANCIAL FIGURES FOR YOUNG MEMORIAL VOCATIONAL-TECHNICAL SCHOOL

	State Funds	Federal Funds	Work Study	Other	Total	Value of Property*	Value of Equipment	Total
1965	100,419	58,738		347	159,505	416,361	98,253	514,614
1966	135,000	17,479		6,480	161,459	416,361	125,952	592,313
1967	192,574	75,939	8,010	2,978	279,501	416,361	182,636	598,997
1968	NA	NA	NA	NA	NA	NA	NA	NA
1969	209,797	56,989	NA	652	267,438	416,361	236,129	652,490
1970	196,717	61,242	1,000	918	259,877	416,361	319,451	735,812
1971	230,014	110,019	1,500	1,269	342,802	416,361	367,219	783,580
1972	296,777	103,920	2,000	11,340	414,037	416,361	367,219	783,580
1973	279,068	129,848	NA	14,153	423,069	416,361	421,409	837,770
1974	372,793	116,010	NA	3,160	491,963	416,361	476,611	892,972
1975	395,375	151,230	4,000	2,200	552,805	416,361	468,708	885,069

*Apparently there has been no revaluation of property since the school opened in 1965.

Source: State Department of Education of Louisiana, Annual Report, 1965-1975 inclusive.

The impact of the oil industry can particulary be seen if one examines emergency room care. In 1964, 46 per cent of emergency room cases were from oil-related industries. By 1974, this percentage rose to 62 per cent (Kiene and Assoc.). In 1964, patients from oil and oil-related industries comprised 43 per cent of the hospital population. The corresponding figure for 1974 was 56 per cent. For details see Table S-16.

TABLE S-16

EMERGENCY ROOM TREATMENT AND HOSPITALIZATION OF PATIENTS FROM OIL AND OIL-RELATED INDUSTRIES

Year	Emergency Room Trt.		Hospitalization	
	No. of Cases	Per Cent of Total	No. of Cases	Per Cent of Total
1964	6,412	46	3,203	43
1965	6,246	45	2,779	45
1966	5,593	47	2,950	45
1967	5,495	47	2,705	46
1968	6,218	49	2,771	45
1969	6,293	53	2,768	45
1970	9,714	53	2,768	47
1971	12,244	58	3,076	50
1972	11,467	58	3,626	52
1973	11,685	59	3,177	53
1974	12,287	62	3,498	56

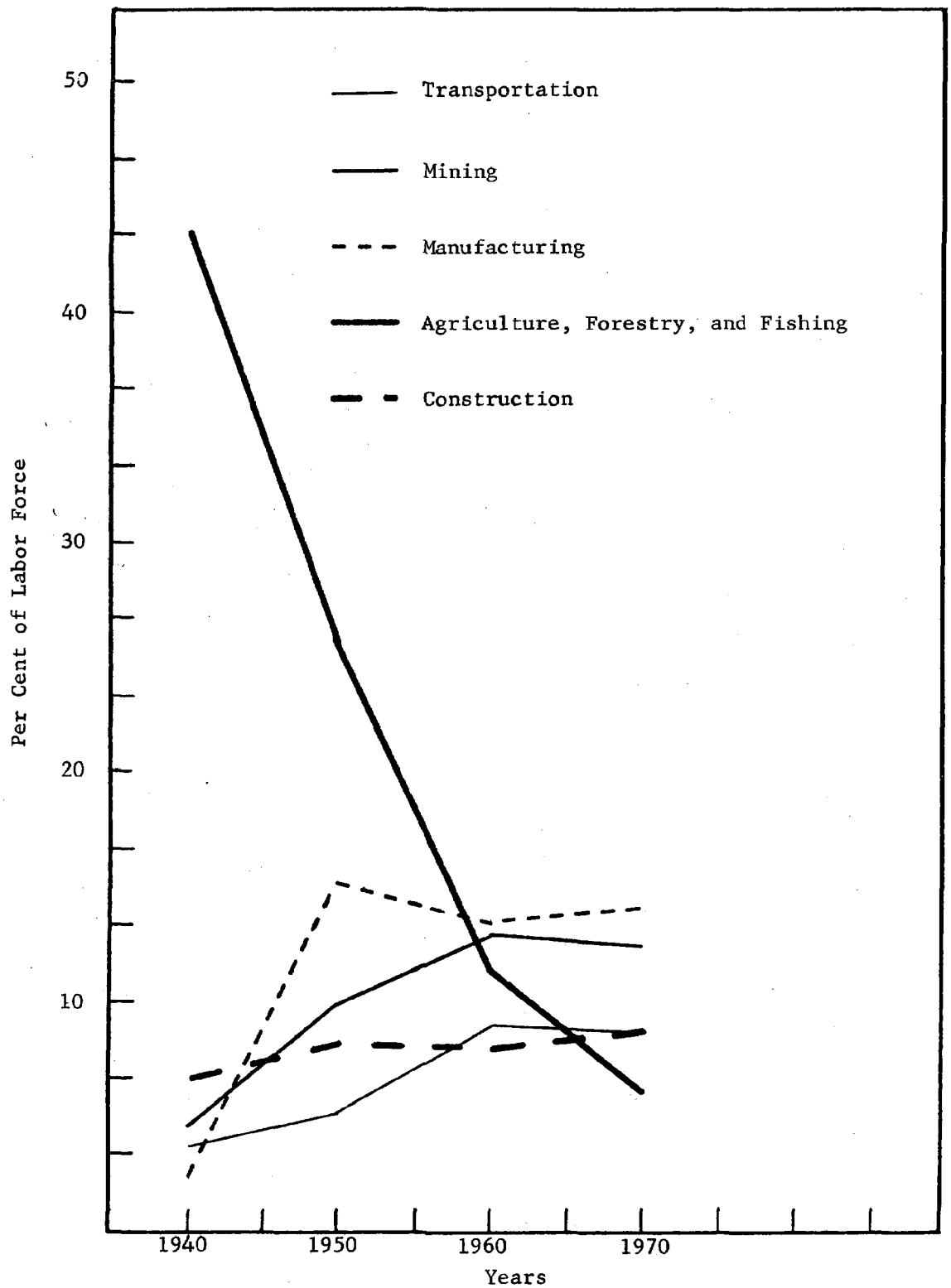
Source: Paul Kiene & Assoc., Survey of Need for Lakewood Hospital, Morgan City, Louisiana, 1974.

Occupational Characteristics

Occupational Shifts

Prior to the onset of OCS activity, St. Mary Parish was primarily rural. It should be recalled (From Table S-1) that the total population of St. Mary Parish in 1940 was 31,458, of which 64.3 per cent resided in rural areas (See Table S-2). This rural to urban shift is strongly linked with changes in the occupational structure. From 1940 to the present, there has been a drastic drop in the number of people employed in areas related to agriculture, forestry and fisheries (See Table S-17 and Graph S-4). St. Mary Parish has seen the portion of the labor force engaged in agriculture decline from 33.8 per cent in 1940 to 4.3 per cent in 1970. It should be noted that this is coherent with a state and national trend (See Table S-18). Louisiana employment figures show a drop from 32.5 per cent in 1940 to 3.7 per cent in 1970 for agricultural employment.

DISTRIBUTION OF EMPLOYMENT BY INDUSTRY
GRAPH S-4



Source: Department of Commerce, Bureau of the Census.

TABLE S-17

ST. MARY PERCENTAGE DISTRIBUTION OF EMPLOYMENT

Industry	1940	1950	1960	1970
Agriculture	33.8	18.5	8.8	4.3
Forestry and Fisheries	5.3	7.2	2.3	1.5
Mining	4.2	9.9	12.7	12.1
Contract construction	6.5	7.7	7.3	7.7
Food and Kindred Products mfg.	9.4	8.1	4.1	2.0
Textile Mill mfg.	0	0	0	0
Apparel mfg.	0	0	0	0
Lumber, wood products, furn. mfg.	4.4	3.3	.4	.2
Printing and Publishing mfg.	.3	.4	.7	.6
Chemicals & allied products mfg.	.1	.4	2.8	2.9
Electrical & other machinery mfg.	.2	.4	.9	1.0
Motor vehicles & equip. mfg.	0	0	0	0
Other transp. equip. mfg.	.8	1.4	1.8	3.0
Other and miscellaneous mfg.	.5	.8	2.8	3.9
Railroads & railway express	1.2	1.3	.5	.2
Trucking and warehousing	.6	.4	.8	1.6
Other transportation	1.6	3.1	7.2	6.5
Communications	.3	.6	.9	.9
Utilities and sanitary services	.3	.7	1.5	1.9
Wholesale trade	.9	1.5	3.4	4.4
Food & dairy products stores	3.5	4.2	3.1	3.5
Eating & drinking places	2.5	3.4	3.0	3.9
Other retail trade	4.2	6.9	7.8	8.7
Finance, insurances & real estate	.8	1.0	1.3	3.2
Hotels & other personal services	2.4	2.3	2.3	2.0
Private households	7.6	6.0	7.2	4.1
Business and repair services	1.3	1.3	2.6	4.0
Entertainment, recreation services	.6	.9	.5	.9
Medical, other professional services	3.4	5.0	8.4	11.6
Public administration	1.6	2.1	2.4	2.9
Armed services	0	0	.1	.1
Industry not reported	1.6	1.0	2.4	7.6
TOTAL	100.0	100.0	100.0	100.0

Source: Bureau of Economic Analysis, U.S. Department of Commerce, Regional Employment by Industry, 1940-1970.

The trend in forestry and fisheries has been somewhat different for St. Mary Parish than for the rest of the state. Employment in these areas peaked around 1950 in the parish at 7.2 per cent and had declined to 1.5 per cent by 1970. The state, on the other hand, has had a relatively stable trend of employment in these areas of about 1 per cent or below. In St. Mary Parish, these declines can be attributed to the virtual extinction of formerly

heavy cypress forests due to heavy timber activity, and the reduction of shrimping activity in the Morgan City and Berwick areas. This latter trend is partly due to the petroleum industry's ability to compete more favorably economically for waterfront space and consequently the increased domination of available waterfront facilities by oil-related interests.

TABLE S-18

LOUISIANA PERCENTAGE DISTRIBUTION OF EMPLOYMENT

Industry	1940	1950	1960	1970
Agriculture	32.5	17.4	7.3	3.7
Forestry and Fisheries	1.0	1.0	.5	.4
Mining	1.9	2.7	3.6	3.9
Contract construction	4.6	7.5	8.2	8.1
Food and Kindred Products mfg.	2.7	3.0	3.1	2.0
Textile Mill mfg.	.4	.2	.1	.1
Apparel mfg.	.5	.6	.6	.7
Lumber, wood products, furn. mfg.	3.9	3.5	2.2	1.5
Printing and Publishing mfg.	.6	.7	.8	.8
Chemicals & allied products mfg.	.8	1.3	1.8	2.2
Electrical & other machinery mfg.	.3	.4	.7	1.1
Motor vehicles & equip. mfg.	.1	0	.1	.1
Other transp. equip. mfg.	.3	.5	.7	1.5
Other and miscellaneous mfg.	3.5	4.9	5.7	5.4
Railroads & railway express	1.9	2.1	1.3	.7
Trucking and warehousing	1.0	1.0	1.2	1.2
Other transportation	2.2	3.1	3.2	2.9
Communications	.6	1.1	1.2	1.3
Utilities and sanitary services	.9	1.5	1.9	1.7
Wholesale trade	2.4	3.7	3.7	4.7
Food & dairy products stores	3.2	3.5	3.1	3.0
Eating & drinking places	2.4	3.3	3.1	3.0
Other retail trade	6.7	9.0	10.2	10.0
Finance, insurances & real estate	2.0	2.5	3.6	4.3
Hotels & other personal services	3.4	3.3	3.5	3.1
Private households	9.0	5.7	6.9	4.0
Business and repair services	1.5	2.2	2.4	2.9
Entertainment, recreation services	.8	.9	.7	.7
Medical, other professional services	6.1	8.4	12.1	17.5
Public administration	2.6	3.8	4.3	4.5
Armed services	.4	1.2	1.9	3.1
Industry not reported	1.0	1.5	3.3	7.0
TOTAL	100.0	100.0	100.0	100.0

Source: Bureau of Economic Analysis, U.S. Department of Commerce, Regional Employment by Industry, 1940-1970.

While a comparable breakdown for Morgan City is not available, we can examine the agriculture, forestry and fisheries industries in a combined fashion (See Table S-19). The concentration of employment in these areas has never been as great for Morgan City as the rest of the parish. This is to be expected since agriculture and forestry are primarily rural pursuits. Nonetheless, Morgan City has shown a corresponding decline in these areas. For example, in 1950 Morgan City had 8.8 per cent of its labor force engaged in agriculture, forestry and fisheries, while in 1970, only 1.7 per cent were similarly engaged.

TABLE S-19

PER CENT EMPLOYED BY MAJOR OCCUPATIONAL GROUP FOR MORGAN CITY

	1950		1960		1970	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Total Employed	3,187	100.0	4,398	100.0	5,732	100.0
Agriculture, Forestry & Fishery	283	8.8	135	3.0	101	1.7
Mining	504	15.8	571	12.9	666	11.6
Construction	292	9.1	366	8.3	292	9.1
Manufacturing	499	15.6	425	9.7	594	10.3
Transportation	309	9.6	488	11.0	516	9.0
Wholesale & Retail	700	21.0	1,800	22.7	1,112	19.3
Finance, Insurance & Real Estate	31	.97	73	1.6	217	3.7
Business & Repair	45	1.4	128	4.0	322	5.6
Personal Service	225	7.0	422	9.5	353	6.1
Entertainment	43	1.3	24	.05	35	.06
Hospital & Health	NA	NA	83	1.8	243	4.2
Schools, Prof. Welfare, Religion	161	5.0	306	6.9	441	7.6
Public Administration	67	2.1	85	2.0	201	3.5

Sources: U.S. Department of Commerce, Seventeenth Census of the United States, Volume II, Characteristics of the Population, 1950.
U.S. Department of Commerce, Eighteenth Census of the United States, Volume II, Characteristics of the Population, 1960.
U.S. Department of Commerce, Nineteenth Census of the United States, Volume II, Characteristics of the Population, 1970.

Of primary interest to this study would be the people employed under the occupational category of mining. With the exception of a very small number of persons engaged in salt mining, this category is entirely comprised of people working in petroleum-related pursuits. For St. Mary Parish, the largest increases in mining occurred from 1940 to 1960. In 1940, 4.2 per cent of the labor force was engaged in mining (See Table S-17). This was primarily due to onshore petroleum activity which had been active in St. Mary Parish for several decades. With the beginning of offshore activities in 1947, the employment in the mining category increased drastically. By 1950, mining accounted for 9.9 per cent of employment in the labor force. While much of this activity was not really occurring offshore, the increase in exploration and production was occurring in the swamps and coastal marshes of St. Mary Parish. In fact, the techniques developed for these environments were direct precursors of present-day offshore drilling techniques. By 1960, offshore activity accounted for a significant portion of the mining category, which had risen to 12.7 per cent of the labor force. Mining remained stable from 1960 to 1970 and actually underwent a slight decrease to 12.1 per cent. The leveling off of this trend might be attributed to: (1) the physical dispersion of the petroleum industry along the coast of Louisiana and Texas; (2) the increase in secondary and tertiary industries supporting the petroleum industry, but not appearing in the mining category as Morgan City became a major center for support facilities for the petroleum industry; and (3) an increase in production-related activities as opposed to exploration activities.

Available data for Morgan City indicate a decline in the percentage of citizens engaged in the mining industry, as this above-mentioned trend in increased support facilities materialized. In 1950, 15.8 per cent of Morgan City's labor force was engaged in mining, as opposed to 12.9 per cent in 1960, and 11.6 per cent in 1970 (See Table S-19).

Support industries for the petroleum activities would be represented in other industrial categories such as manufacturing and transportation. Manufacturing rose drastically from 1940 to 1950 (See Graph S-4) and has remained at a relatively stable level up to the present time.

If we break down the manufacturing category for St. Mary Parish (See Table S-17) several trends become obvious. There were dramatic increases in such areas as primary and fabricated metal, transportation equipment, chemical, and machinery manufacturing. It is obvious that these trends were related to growth in the petroleum industry, since the corresponding growth in these areas had exceeded the growth pattern of the rest of the state (See Table S-18).

Indicative of the decline in agriculture and fisheries has been a corresponding decline in the manufacture of food and kindred products (See Table S-17). In 1940, 9.4 per cent of the labor force in St. Mary Parish was engaged in such pursuits and this figure has steadily declined down to 2.2 per cent in 1970.

Changes in the area of transportation are also notable. The percentage of parish workers employed in transportation areas rose from 3.9 per cent in 1940 to 4.8 per cent in 1950. By 1960, this percentage had risen to 8.5 per cent, only to decline to 7.8 per cent in 1970. The growth in transportation from 1940-1960 correlates well with other indicators such as growth in population size, school attendance, and employment in mining and manufacturing.

Morgan City has also experienced changes in the concentration of its workers employed in the transportation category. From 1950 to 1960, this percentage rose from 9.6 per cent to 11.0 per cent (See Table S-19). Much of the transportation-related activity is tied to water transportation in the forms of crew boats, pusher boats, work boats, etc.

Employment in construction in St. Mary Parish has shown remarkable stability from 1940 to the present (See Graph S-4). Many of the activities in the oil industry such as steel fabrication, water transportation, etc., have no real impact on figures for construction since little is actually constructed. Housing construction is usually one of the activities which strongly affects figures on construction. Much of the increased demand for housing in St. Mary Parish and Morgan City has been met by mobile homes not constructed in the area. This is due not only to lack of available land to build single family residences, but also the pressing need for immediate, functional housing, due to large in-migrations.

Another industry in St. Mary Parish which has experienced considerable growth is that of business and repair services. Growth in these areas has exceeded the state average. Morgan City has shared in this trend as illustrated by the fact that only 1.4 per cent of the labor force in 1950 was employed in business and repair services and that by 1970 5.6 per cent of the people were employed in these areas.

In terms of actual occupations, the people of St. Mary Parish and Morgan City, as shown in Tables S-20 and S-21 have shifted their pursuits.

Per Capita Income

The median income level for Morgan City residents has consistently been higher than the level of the rest of the parish (See Table S-22). In turn, the income level of St. Mary Parish exceeded the state median from 1950 through 1970. But on a nationwide basis, the national median income level has been higher than all of the other three figures in question, as would be expected. Obviously, the citizens of Morgan City and St. Mary Parish are sharing in the prosperity which can largely be associated with the petroleum industry. For further details consult the economic section of this report.

TABLE S-20

MORGAN CITY
MAJOR OCCUPATION GROUP

	1950		1960		1970	
	Male	Female	Male	Female	Male	Female
Total	2,489	698	3,228	1,170	4,030	1,702
Prof., tech. & kindred	154	84	199	173	453	252
Farmers & farm mgrs.	2	0	0	0	0	0
Mgrs., officials & props.	379	42	647	55	805	88
Clerical & kindred	97	103	149	237	262	585
Sales workers	108	92	117	125	242	149
Craftsmen, foremen & kindred	408	6	639	4	774	38
Operatives & kindred	702	108	848	83	612	54
Private household	1	112	0	237	4	178
Service workers except private household	136	137	184	221	253	345
Farm laborers	5	0	5	0	0	0
Laborers	481	1	330	4	335	13
Not reported & other	16	13	110	31	290	0

Source: Statistical Profile of St. Mary Parish, Public Affairs Research Council, 1973.

TABLE S-21

ST. MARY PARISH
MAJOR OCCUPATION GROUP

	1950		1960		1970	
	Male	Female	Male	Female	Male	Female
Total	8,660	2,490	10,916	3,722	13,580	5,550
Prof., tech. & kindred	412	267	575	554	1,369	900
Farmers & farm mgrs.	273	8	197	4	132	4
Mgrs., officials & props.	883	127	1,583	166	1,913	241
Clerical & kindred	253	309	445	714	657	1,772
Sales workers	318	248	321	298	557	409
Craftsmen, foremen & kindred	1,206	14	1,941	13	1,197	108
Operatives & kindred	1,866	253	3,111	205	2,490	198
Private household	14	550	14	949	21	711
Service workers except private household	412	367	502	569	779	1,060
Farm laborers	1,338	289	638	62	580	9
Laborers	1,619	15	1,209	4	1,242	101
Other	66	43	380	184	2,643	37

Source: Statistical Profile of St. Mary Parish, Public Affairs Research Council, 1973.

TABLE S-22

MEDIAN INCOME LEVEL FOR ST. MARY PARISH, MORGAN CITY, LOUISIANA, AND THE UNITED STATES

	1950	1960	1970
Morgan City	$2,438	$5,305	$8,496
St. Mary Parish	$1,831	$4,686	$8,146
Louisiana	$1,810	$4,272	$7,530
United States	$3,319	$5,660	$9,950

Source: U.S. Department of Commerce, Seventeenth Census of the United States, Social & Economic Characteristics of the Population, 1950.
U.S. Department of Commerce, Eighteenth Census of the United States, Social & Economic Characteristics of the Population, 1960.
U.S. Department of Commerce, Nineteenth Census of the United States, Social & Economic Characteristics of the Population, 1970.

IMPACT ASSESSMENT

The social and cultural impact of offshore drilling on Morgan City and St. Mary Parish can be summarized into four major areas: (1) increase in income both in St. Mary Parish and Morgan City; (2) major shifts in the occupational structure; (3) growth in population size for the city and parish, and in the physical size of urban areas; and (4) increase in the complexity of the division of labor for the area.

The most obvious positive effect of offshore activity has been the increased income of people in the area (Recall Table S-22). Increase in income levels can be positively associated with the purchase of not only essentials for living, but also luxury and recreation-associated items. As the income potential of people becomes greater, they begin to acquire items which would conspicuously display their success. The growth and diversification of retail industries catering to these needs has been evident and should continue into the future. Not only has income increased, but there has been relative stability over a long period of time, such that the people have come to take the higher standard of living for granted, which should lead to greater stability of retail growth and diversification.

Much of the increased income has occurred as a result of occupational shifts which has resulted in more specialized, as well as higher paying jobs. As the petroleum industry has come to dominate the Morgan City area more and more, it has been able to favorably compete for labor, leaving the citizenry with a wider variety of occupational choices. Many of these choices necessitate changes in life style. This is especially true since many of the offshore occupations require "seven-on" and "seven-off" shifts, or some other combination of extended presence on the job. Such working

conditions drastically alter recreation patterns, family interaction, community involvement, etc.

In addition, many areas of blue collar work have further expanded, particularly with the service industries, leading to a large stable working class. Unlike working classes in other parts of the country, these people are relatively more economically secure, and thus are in a position to develop a life style, and purchasing habits usually associated with traditional middle and upper middle class values. One problem which may be related to the increased purchasing power of blue collar workers is that a middle class professional such as school teachers may be lured away from essential jobs because they could move to other areas and occupy a relatively higher position in the economic and status hierarchy.

The obvious success of the parents of young people in the Morgan City and St. Mary Parish area has resulted in a low out-migration by young people seeking employment, as they are presented with a realistic role model of economic success. This can be achieved through vocational training at the local level in a relatively short time at a low cost.

As these trends continue, assuming that economic activities of the petroleum industry do not decline, continued growth in the physical size, and population mass is to be expected. Continued physical growth is one of the potential sources of problems which is a by-product of growth in the petroleum sector. There may be problems in terms of planning for expanded police protection, transportation, municipal services, and providing for recreational opportunities if the rapid growth continues. Problems which could be particularly acute would be in highly specialized service areas such as hospitals and other forms of health care. In addition, it seems that St. Mary Parish could benefit from increased investment in educational and vocational service.

Another major problem demanding attention which was precipitated by rapid population growth and increased purchasing power of the individual worker is the acute shortage of single-family dwellings. This may result in people living outside of Morgan City and even St. Mary Parish, in order to have a home of their own. Thus, the tax base for Morgan City might stabilize while the demand for municipal services is increasing.

The only apparent population change that can be anticipated is the continued increase in the white versus black ratio. There appears to be no shortage of people in the productive ages nor any major imbalance in the number of elderly people.

One of the concomitants of the above-mentioned economic trends has to do with increases in the complexity of the division of labor. This results in a trend toward what has been called organic solidarity,as opposed to mechanical solidarity (See Durkheim, 1947) or a rational versus a traditional orientation of community members (See Weber, 1947). Traditional or mechanical solidarity is characterized by: close, face to face affective ties, which is generally associated with extended kinship networks, and a stable tightly knit community.

As there is movement toward the rational, or organic solidarity, the community becomes more segmented and diverse. Diversification in the occupational sector leads to different orientations concerning interaction with one's peers and the community at large. This shift is characteristic of all developing urban areas but should hold particular relevance for Morgan City, which has been transformed in roughly 40 years from what might be called a "sleepy little fishing village" to a major industrial center.

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GOVERNMENTAL AND POLITICAL ANALYSIS

Donn Kurtz, Author

Tom Ferrell, Author

Jay Leuckel, Research Assistant

GOVERNMENTAL AND POLITICAL ANALYSIS

Introduction

This portion of the research attempts to assess the governmental and political impact of the development of the offshore oil industry on the Morgan City area and St. Mary Parish. The analysis is divided into three parts. First, the relevant governmental structures are described with special emphasis on any changes that have occurred since the end of the Second World War. The second part of the report focuses on four issues or decisions made during the time period covered with the purpose of identifying any industry involvement. The final section draws conclusions from the preceding discussion.

Governmental Structures

Morgan City. The municipality of Morgan City was first incorporated as the town of Brashear by legislative Act #102 in 1860. In 1871 the Brashear charter was replaced by a new document (Act 99 of the 1871 legislature) which provided for four year terms for the mayor and council rather than the original one year terms. A few years later, through legislative Act #7 of 1876, the name of the city was changed to Morgan City but the charter of 1871 remained in effect.

The Charter under which Morgan City now operates has been amended four times through legislative acts since 1871. Those amendments are as follows:

1) Act 427, 1948 - created a city court replacing the old Mayor's Court

2) Act 88, 1950 - provision for date of city elections

3) Act 429, 1956 - added sections 3a through 3r to the Charter giving the city the power to construct and pave streets and to levy and collect local special assessments

4) Act 224, 1958 - set fee schedule and salary of city court judges

The Charter establishes essentially a weak mayor system in that most powers are shared between the mayor and the council. Most notably many appointments such as department heads are made through mayoral nomination and council approval. These officials may be removed only for cause. Only the City Clerk-Marshall (who is also the tax collector), the Treasurer, and the Assessor serve at the pleasure of the mayor.

The Mayor does have a veto over council actions but that veto may be overridden by a two-fifths vote of the council. An additional power of the Mayor is that of authorizing the Treasurer to pay out monies to departments and commissions.

In addition to the three officials mentioned above, Morgan City has an Engineer, City Attorney, Secretary, Fire Chief, Police Chief, City Purchasing Agent, City Judge and Clerk of Court among its major officers. Moreover, there are seven commissions with specific functions assigned to them.[1] These bodies are composed of from five to twenty-one members with council members often holding ex officio membership. Other members are usually appointed by the Mayor and the Council.

The City Council is composed of five members elected for four-year terms concurrent with that of the Mayor. It has the powers and duties normally associated with municipal governing bodies.

Berwick. The first structure of government in Berwick was provided for by the Lawrason Act of 1898. Classified first as a village, then as a town (1907), Berwick functioned under the provisions of this act until 1966. From 1907 to 1966 the municipality had a popularly elected mayor, five aldermen, and a marshall (also the tax collector). The mayor presided at meetings of the board of aldermen, cast tie-breaking votes, and held the veto power. Officials served concurrent two-year terms.

In 1966, Berwick adopted a Home Rule Charter which created a strong mayor-council form of government. Both the mayor and the five council members are elected at-large for four-year terms.

The mayor has the authority to appoint and remove all town employees and to appoint, with council approval, members of boards and commissions. He presides over council meetings but has no vote. The mayor may veto any council action and has a line item veto on appropriation measures.

In addition to the Mayor, the executive branch consists of the following departments: Fire, Police, and Planning. The charter also states that a Legal Department, Community Service Department, Finance Department, and Public Works Department may be created by the Mayor and Council. Finally, an administrative officer may be created by the Mayor and Council.

The five member city council is the governing authority of Berwick for legislative purposes. It elects a mayor pro tem who presides in the absence of the mayor.

Planning Agencies. Today there are four planning agencies relevant to this study. They are the Morgan City Planning Commission, the Berwick Planning Commission, and the Regional Planning Commissions, Number 1 and Number 2.

1) Morgan City Planning Commission - Today there are three planning commissions relevant to this study of which the Morgan City Planning Commission is one.

Created by City Ordinance in February 1967, the commission has the powers of such bodies as conferred by Louisiana law (R.S. 33:4721. through

R.S. 33:4729). With an authorized membership of five to seven persons, the commission had seven members in 1972 appointed by the Mayor with the advice and consent of the City Council. The original appointees serve for staggered terms, but the normal term is five years. The members elect a chairman for a one-year term. The commission itself is required to meet at least once a month.

In addition to its planning functions, this body also serves as the municipal zoning commission. When functioning in that capacity, it must hold separate meetings and keep distinct minutes.

2) Berwick Planning Commission - The head of the Berwick Planning Department is the Planning Commission (as authorized in R.S. 33:102). The commission is composed of five members appointed by the Mayor with council approval.

3) Regional Planning Commission Number 1 - This agency was created in August 1973 under the provisions of Louisiana law contained in R.S. 33:131 through 142 (this description is taken from the Morgan City Code of Ordinances section 2-90 through 2-95). Nine members comprise the commission, six are appointed by the Police Jury and one each, by Morgan City, Berwick and Patterson. Original appointees serve for staggered terms of one to nine years, with subsequent members holding office for five years.

Similar to its Morgan City counterpart, the commission must meet at least once a month, and elects a chairman and other officers. It may appoint employees and contract for work. Funds for the commission come from allocations provided by the participating governments. The jurisdiction of the commission covers all of St. Mary Parish east of the Wax Lake Outlet (includes Wards 5, 6, 8, and 9).[2]

In May 1974, the commission issued a report entitled "Analysis of Existing and Proposed Land Use, St. Mary Parish Planning Area Number 1, Comprehensive Plan."

4) Regional Planning Commission Number 2 - This commission was established under the same statutory authority as the Regional Commission Number 1. It is composed of nine members appointed by the governing authorities in the commission's geographical area of jurisdiction. This body has planning authority for Wards 1, 2, 3, 4, 7, and 10.[3]

Multi-Functional Districts.

1) Morgan City Harbor and Terminal District. The Morgan City Harbor and Terminal District was established by Legislative Act 530 of 1952. The district, which covers a 140 square mile area in East St. Mary Parish (excluding Patterson), came into existence as a result of the increased demands being made on the Morgan City port.[4] That increased usage was itself the result of both the growing shrimping and offshore oil activity after World War II.[5] One of the early projects of the new district was to deepen the ship channel from 10 to 14 feet.

A nine-member Board of Commissioners is the governing authority of the district. All members are appointed by the governor, but five positions are filled from a list submitted to him by local governing bodies and civic groups.[6] The governor has unrestricted appointive power over the other four members who originally served terms of from six to nine years. After the original terms expired, vacancies were filled in the same manner for a nine-year term.

A President, Vice President, Secretary and Treasurer (may be filled by one person) are elected from among the members of the Commission. The Commission is required to meet at least once a month and to submit annual reports to the governing authorities of Morgan City and Berwick.

The district enjoys the full range of powers delegated to special districts by state law. These powers include regulating the traffic and commerce within the district; construction, ownership, and maintenance of facilities; designing, building, and leasing of industrial sites; maintaining and expanding waterways; regulating fees of privately owned facilities; acquiring land; levying ad valorem taxes; and issuing bonds.

2) West St. Mary Port Harbor and Terminal District. This political entity was created by Act 604 of the 1974 legislature and has jurisdiction over all of St. Mary Parish except Ward 5 and those areas under the jurisdiction of the Morgan City Port Authority.

A nine-member Board of Commissioners serves as the governing body of the district. These members are appointed by the cities of Franklin and Baldwin and by the St. Mary Police Jury,[7] unlike the Morgan City authority whose members are appointed by the governor and only nominated by local governing bodies and groups.

The Board elects a President, Vice President, Secretary, and a Treasurer (the latter two offices may be combined). The Board must meet at least once every month. Act 604 permits the Board to set its own internal rules of procedure and to hire a wide variety of employees.

Like its Morgan City counterpart, the West St. Mary Port Authority enjoys the full range of powers delegated by state law. Included in these powers are the right to acquire land; construct facilities; set use fees; borrow money; levy an ad valorem tax on property within the district subject to such taxes; and issue revenue bonds.

Policy Analysis

Perhaps one of the most striking characteristics of government and politics in Morgan City is the degree of stability in the institutional positions of political power. Morgan City, as is documented in other sections of this report, has experienced considerable population growth, as well as economic and social changes of no little magnitude, since the offshore petroleum industry became a vital element in the area's economy. However,

in spite of these changes, there has been remarkable continuity among government office holders. It would be difficult to point to another municipality of comparable size in Louisiana that has had only three mayors since 1911. The incumbent mayor, Dr. C.R. Brownell, was first elected in 1950. While an in-depth historical analysis of institutional leadership in St. Mary Parish is beyond the scope of this study, it is clear that a relatively small number of men are elected and re-elected to public offices with considerable regularity. The names of C.R. Brownell, Ralph E. Guidry, M. David Kahn, Joseph Cefalu, Frank Domino, and a few others have appeared quite frequently among the victors in election returns in recent decades.

The relatively slow rate of turnover among elected governmental officials is, of course, only one indicator of the rate of change in the area's political system. The possibility remains that changes of a significant nature may have occurred in the processes through which governmental policy decisions are made. One cannot conclude at this point that the area's political system had remained substantially unchanged since the early years of offshore petroleum production.

In order to obtain a more detailed portrait of the decision-making process, it is necessary to examine the exercise of political power within more specific situational contexts. It is, as a matter of fact, desirable to focus on particular political issues; determine how these issues are resolved; and identify the individuals and groups that play roles in the resolution of them. The political impact of a single interest, such as the petroleum industry, cannot be identified without this contextual information.

The research team selected four issues for close examination. It is not contended that these four issues were necessarily the most important or controversial that faced the citizens of St. Mary Parish in the post-war period. Rather, these particular issues were selected because they appear to the researchers to be of sufficient significance to activate important political actors in the community; they permit an analysis of decision-making in three different decades (the 1950's, 1960's, and 1970's); and because they are issues that would appear to have an impact on the questions of who shall possess political power and how it shall be exercised.[8]

The issues chosen for a detailed examination are the creation of the Morgan City Harbor and Terminal District; the creation of the West St. Mary Parish Port, Harbor, and Terminal District; the adoption of a home rule charter in Berwick; and the establishment of the Louisiana Municipal Power Commission (LAMPCO). These issues were selected by examining the political and governmental news articles pertinent to Morgan City and St. Mary Parish in two newspapers and two periodicals. The newspapers are the Morgan City Daily Review and the St. Mary and Franklin Banner-Tribune. The journals are the official organs of municipal and parish governments in Louisiana: The Louisiana Municipal Review and Parish Government (formerly, the Louisiana Police Jury Review). The front pages of the Morgan City and Franklin newspapers were examined for the periods of 1935 to 1977 and 1974 to 1977, respectively. All issues of the Louisiana Municipal Review from 1950 to

1977 and the parish journal from 1941 to 1974 were also scrutinized. In addition to facilitating the selection of the issues to be analyzed, these sources provided a detailed political history of the area unavailable elsewhere.

The reconstruction and analysis of the decision-making process in the four issue areas was accomplished primarily through the use of material from the two newspapers and through interviews with individuals holding local governmental offices in St. Mary Parish. In order to facilitate the collection of information, those individuals who consented to be interviewed were promised anonymity by the researchers. Therefore, the information and opinions which these public officials provided have not been attributed to them personally in the following pages.

Attempts to determine the loci and patterns of political influence in municipalities are commonly referred to as "community power studies." The following description and analysis of four political issues has made use of the methodological frameworks and assumptions of the reputational and pluralist approaches to the study of community power.[9]

A. Morgan City Harbor and Terminal District. The port authority was authorized by an act of the Louisiana legislature in July of 1952. But the initiative in the creation of the district clearly came from locally elected officials. In fact, the Morgan City Review referred to the proposal as the result of a "sudden decision on the part of public bodies in the immediate area."[10] The legislature was simply responding to local demands.

Mayor Brownell of Morgan City and Mayor Driskell of Berwick urged the creation of the district at several meetings of locally elected officials and at mass public gatherings. Additional public support for the proposal came from City Attorney Leonard Wise of Morgan City; the President of the St. Mary Police Jury, D.C. Walsh; police jurymen J.D. Hamilton, Joseph Cefalu, and Robert Marcel; Berwick aldermen Adam Robicheaux and Russel DePrima; and Morgan City councilmen, Harry Hover, P.H. Henry, Dr. B.A. Mula, Dave Kann, and Wyatt Rosen.[11] The bill, which was drafted by attorneys Leonard Wise and J.Y. Gilmore, clearly had the public support of the vast majority of elected governmental officials in East St. Mary Parish.

The decision on the part of elected officials in the parish to push for the creation of the district appears to have been at least partially a reflection of the eagerness of the same officials to secure a deep-water channel to serve the locality. During discussions between local public officials and representatives of the United States Corps of Engineers in May of 1952, governmental leaders apparently were told by Corps representatives that progress on the channel would proceed more rapidly if the area had a port authority.[12] This interpretation is further strengthened by a statement by Mayor Brownell before a public meeting called to rally support for the project: "For twenty years we have thought in terms of proper waterways and have tried everything possible, ...now we are told that a port authority may lead to our goal. Let's back this bill and put it into force."[13]

Local opposition to the authority centered around its power to "expropriate" land and to levy a tax of 2.5 mills or less without the approval of the electorate. Opposition, however, remained disorganized and without apparent leadership until the bill creating the authority was introduced in the state legislature by Representative Aycock and Senator Burleigh.

Although the proposed legislation carried the endorsement of the Berwick and Morgan City municipal governments and the St. Mary Parish Police Jury, it ran into minor difficulties in the state legislature. Representative P.E. Grizzaffi of Morgan City objected to numerous provisions of the bill. Grizzaffi later withdrew his objections when the bill was amended to allow the governor to appoint the members of the authority's governing commission from lists submitted by governmental and civic organizations. The original legislation had authorized local governmental bodies to make the appointments directly. After this change, the bill was overwhelmingly approved by both houses of the legislature.

While the initial support for the port authority clearly came from public officials, there were also indications of participation by the business community. Mayor Driskell of Berwick, a supporter of the project, was soon to become president-elect of the Morgan City-Berwick Chamber of Commerce. Police juryman Cefalu had previously served as president of the same organization. Another member of the parish governing body and supporter of the authority, J.P. Hamilton, was to become a vice-president. This overlap of political leadership with leadership in the business community has been a consistent feature of Morgan City politics in recent decades.

B. Berwick Home Rule Charter. Prior to 1966 Berwick, like many of the smaller municipalities in Louisiana, operated under the weak mayor-council form of government prescribed by the Lawrason Act enacted by the Louisiana legislature in 1898. The old Berwick charter was adopted under the provisions of the Lawrason Act in 1907. The deficiencies of the weak mayor-council form of municipal government have been well documented and there is no need to examine them here.

In January of 1963, through the efforts of Mayor Ralph Guidry of Berwick and the members of the Berwick town board, a committee was named to draft a charter making use of the home rule authority granted to Louisiana municipalities through a 1952 constitutional amendment. The five member committee consisted of Dr. C.G. Whitley, Chairman, who represented the town board; Mayor Guidry, who was chosen as a representative of veterans; Alfred Lippman, an attorney who represented professionals; Charles F. Bowman, chosen to represent business; and Warren Drew, selected to represent labor.

As was the case with respect to the creation of the port authority, the impetus in this issue area appeared to originate with governmental officials, in particular the mayor; with representatives of private interests emerging in supporting roles later in the decision process. Although both of the issues were originally formulated and presented to the public by governmental officials, this is not to say that private interests were of no importance. In both cases representatives of private interests were

active in the creation of popular support for the proposals. With the information at hand it is not possible to say with any confidence with respect to the charter issue whether the representatives of private interests were recruited by political leaders or if their participation was primarily self-generated.

The charter committee's report to the town council was accepted by a unanimous vote in June of 1965. When the charter was brought before the voters for their approval in January of 1966, almost 60 per cent of those participating in the election supported it.[14] One of the few political leaders to oppose the charter was Town Marshall Casper Cherry. Cherry's opposition was understandable since his position was abolished when the new charter went into effect.

C. West St. Mary Parish Port, Harbor and Terminal District. Both the supporters and opponents of the West St. Mary Parish Port, Harbor and Terminal District were in general agreement that the principal instigator of this project was the mayor of the city of Franklin, Dr. J.M. Fernandez. Other prominent supporters included Franklin businessman Owen Mire and state legislators Carl Bauer and V.J. Bella.

The legislation creating the new governmental unit was introduced in the state legislature in the summer of 1974. It was supported in a quiet, low key manner in order to minimize possible opposition. However, opposition did eventually develop. The town aldermen of Patterson voted to send letters to Bauer and Bella requesting that their community be removed from the jurisdiction of the district. Opposition in Patterson was centered around the authority of the district to levy an *ad valorem* tax of up to 2.5 mills and the suspicion that the district was being created primarily for the benefit of political and business interests in Franklin.

While Patterson was removed from the jurisdiction of the district, another small St. Mary community, Baldwin, remained a part of it. Nevertheless, some Baldwin area political leaders were distrustful of the motives of the project's supporters. Like their counterparts in Patterson, they saw the project as one to be partially supported by their taxes, but to be primarily for the benefit of Franklin. One leader, for example, referred to the project as "by and for the city of Franklin."

While they contended that the port authority would benefit all of West St. Mary Parish, the supporters of the district did, to a certain extent, confirm the motivations attributed to them by their opponents. They argued that the Franklin area should attempt to slow the movement of petroleum related commerce and industry into the Morgan City, Lafayette, and New Iberia areas by increasing the attractions of Franklin. A feeling of rivalry with Morgan City and the belief that Franklin was not getting "its share" of economic growth were either implicit or explicit in the arguments of those supporting the district. For example, one proponent, argued that Morgan City had benefited considerably from its port authority, and since it did not appear to be politically or legally feasible for Franklin to join the Morgan City Harbor and Terminal District, the creation

of the West St. Mary district was the logical step if that city wished to keep up with Morgan City in the pursuit of "progress."

Opposition to the district, with the exception of the political leaders of Patterson, was diffuse and unorganized. Some of them were not aware of the implications or even the existence of the legislative proposals creating the district until it was already enacted.

Supporters characterized the opponents as enemies of economic progress who were "too concerned with costs." They were portrayed as "old money" interests who feared that their social status or economic positions would suffer by the infusion of "new money" through economic growth.

The West St. Mary Port, Harbor and Terminal District appears to be an issue on which the political leadership of Franklin in cooperation with the more "progressive" business interests successfully pursued their goals over moderate opposition from supporters of the economic status quo in Franklin and some political leaders in the small towns of the parish.

While business interests were an element in the support for the district, clearly governmental officials, especially Mayor Fernandez, were the most influential supporters. Several of the people interviewed spoke of the dormancy of the Franklin Chamber of Commerce in comparison with the one in Morgan City and the difficulty of "prodding" the Franklin chapter into action. Interestingly, Franklin's governmental officials seem more imbued with the pursuit of economic growth or "progress" than the business community as a whole.

D. Louisiana Municipal Power Commission. Perhaps the most controversial issue in St. Mary Parish in the last decade has been the continuing debate over the creation of the Louisiana Municipal Power Commission (LAMPCO), a consortium of Louisiana cities (Morgan City, Franklin, Opelousas, and Natchitoches) that have joined together to create a gas synthesis power plant to provide electrical power to all member municipalities. Thibodaux was also originally included in LAMPCO, but in June of 1976 its city council voted against the city's participation. By April of 1977 the governing bodies of the other four municipalities had approved the project and the State Bond Commission had approved the sale of revenue bonds for the construction of a power plant north of Franklin. LAMPCO expects to begin supplying its member cities with power by 1980 or 1981.

The cities remaining in LAMPCO hope that the synthesis gas method of generating electricity will prove to be less expensive than conventional gas-burning plants because of the lower costs of the high sulphur content fuels to be consumed (tar, asphalt, lignite, and coal) and because of economies of scale presumably created by the large size of the power plant. The gas which is produced through the combustion of the fuels will be used to fire conventional boilers to produce steam to turn turbines generating electricity.

Those respondents interviewed during this study were in agreement that among the principal proponents of LAMPCO were Mayor Brownell of Morgan City and Harold Beard, a consulting engineer of Baton Rouge. Beard's engineering firm does work for a number of Louisiana cities, and Beard personally was credited by one respondent with convincing the participating cities of the project's value.

Although the city councils of all four remaining cities eventually approved the project, one of the mayors, Dr. Fernandez of Franklin, became an opponent and LAMPCO was approved by the Franklin council only over Fernandez's vote. The debate over LAMPCO was decidedly more heated in Franklin than elsewhere. In addition to Mayor Fernandez, other critics of LAMPCO were General William Bigler, U.S. Army (Ret.), who served as the chairman of a citizens' committee on LAMPCO, and Councilman C.C. Burleigh. Opposition to the project centered around the bonded indebtedness to be incurred; the technical feasibility of the new generating process; the failure of the proposal to be placed directly before the electorate; and the relative cost of LAMPCO electricity in comparison with power the city might purchase from Central Louisiana Electric Company (CLECO) or some other private company.

The political divisions on the LAMPCO issue surfaced again in March of 1977 when the State Bond Commission met to consider LAMPCO's request for permission to issue revenue bonds. Mayor Fernandez spoke in opposition, arguing that the city did not have sufficient time to study the project and that the Franklin council erred in not calling a public referendum. He was joined in his opposition by St. Mary Parish attorneys James McClellan and Nick LaRocca, Jr. Among the additional points raised was the contention that the sales contracts with LAMPCO would obligate the municipalities to purchase a prescribed amount of electrical power and redeem a portion of the bonds even if the plant does not operate as promised.

Mrs. Nervella Taylor, president of the Opelousas Chamber of Commerce voiced support for LAMPCO and stated that there was little opposition to the project in her city. She was joined by Mayor Brownell and Harold Beard, who also supported the approval of the bond sale. Dr. Charles Marion of Texaco Development criticized suggestions by opponents that LAMPCO was technically unfeasible. It was, he said, only "marrying existing technology."[15]

Several members of the State Bond Commission pointed out that it was not the responsibility of the commission to resolve the political disagreements between the supporters and opponents of the project or to judge its technological practicality. After satisfying itself that the state's legal requirements had been met, the commission voted unanimously to permit LAMPCO to sell up to 90 million dollars in revenue bonds.

Although elected governmental officials were among the "prime movers" in this issue area, as in the other three, the LAMPCO issue does have at least one distinguishing feature. On this issue there was direct and public participation by a petroleum industry company, Texaco.

Texaco Development, a subsidiary of Texaco, Inc., has developed and marketed the technology of the gasification process world-wide. It holds the patent on the Texaco Gas Combined Cycle. Texaco Development has also entered into an agreement with Beard Engineering to cooperate in the provision of technological and engineering assistance with respect to integration of the gas synthesis unit and plant design.[16] Earlier, Texaco, Inc. had guaranteed in a letter to the LAMPCO board that it could provide one hundred per cent of the fuel needs of the plant (1.6 million barrels of asphalt and tar) for five years. Texaco, Inc. and its subsidiary thus appear to have clear interests in the success of LAMPCO and they have been active in its promotion.

Conclusion

Morgan City and St. Mary Parish stand as evidence that economic and social changes do not necessarily produce political changes of the same magnitude. As was suggested earlier, one of the distinguishing characteristics of the area's political systems are their remarkable stability. Not only have there been relatively few structural changes (particularly true of Morgan City), but a fairly small group of men have held public offices in the area throughout the post-war period.

The data collected and analyzed in this study do not lend support to the hypothesis that communities with policy orientations directed toward economic growth are likely to be dominated politically by business elites.[17] While the structure of Morgan City government has undergone minor changes during the post-war period, there is no evidence to suggest that the oil industry had any impact on those changes. Much the same can be said of the charter change in Berwick.

In the first three of the issue areas examined, elected governmental officials assumed the leadership in the formulation of policy questions and they attempted to rally support for their positions among other sectors of the community. Representatives of private interests, including business, played a supportive and not highly visible role. In the fourth issue area, LAMPCO, there was evidence of participation by nongovernmental groups and individuals from the earliest stages.

While private interests were initiators of policy in only one of the four policy areas examined, it is also evident that concern for the needs of one set of interests, the petroleum industry, have a considerable influence on the policy decisions of elected officials. While they are not the "tools" of "puppets" of an economic elite, they are, nonetheless, in the vast majority of cases committed to doing whatever they believe to be necessary to promote economic growth. A case can even be made that the elected officials in St. Mary Parish manifest a more consistent and enthusiastic commitment to the kind of "progress" measured by economic expansion than do some business leaders--particularly the "old money" interests centered around Franklin. St. Mary Parish does not present a situation in which the petroleum industry

or any other private interest has "forced its attentions" on politicians. Rather political leaders have willingly and with forethought developed their policies to accommodate business expansion.

It would not be an exaggeration to suggest that the St. Mary political system is permeated by the desire for economic growth. In Morgan City there seems to be virtually no dissent from this perspective and in Franklin the same sentiment is gaining strength as that community seeks to gain some of the "benefits" it has seen Morgan City acquire.

This desire to accommodate the petroleum industry and to promote economic growth are seen clearly in the creation of the two port authorities and the LAMPCO issues. The port authorities were promoted at least partially as means of attracting and retaining industry; and LAMPCO was supported by some as a "progressive" project that would guarantee that Franklin's development is not slowed by power shortages or high electrical rates. One area political leader commented that the supporters of LAMPCO were those who were not afraid to "take risks", including substantial governmental borrowing, to insure the community's progress.

It seems likely that most direct attempts by representatives of the petroleum industry to influence governmental policies are directed at the state and national governments. It is primarily these governments which are responsible for regulatory decisions that affect the vital interests of the industry. It is not surprising, therefore, that this study has found little evidence of extensive industry activity designed to influence local government actions.

In addition to the direct involvement of one company in the LAMPCO issue discussed above, we did find two general areas of less direct industry impact. First, it has become apparent to the research team that the economic growth of Morgan City and the eastern part of St. Mary Parish has resulted in something of a bifurcation of the parish. We detected a fairly strong attitude to the effect that there is an "East" Saint Mary Parish and a "West" St. Mary Parish; the former centered around Morgan City and the latter, around Franklin. There is a feeling among at least some elements in the western portion of the parish that that area has lagged behind the Morgan City area in terms of economic development. The creation of the West St. Mary Port Authority some twenty years after the formation of a similar institution in Morgan City is evidence of that attitude and of the desire of the western section of the parish to "catch up".

In addition, the fact that there are now two planning agencies in the parish, one for the East and one for the West, further substantiates the finding that the two areas of the parish feel that they have somewhat different interests and concerns. On a much less significant level, but illustrative nonetheless, in August 1976 there was debate within the police jury over a proposal for parish aid to the Morgan City library. Eastern St. Mary Parish interests argued that the municipal library in Morgan City in fact functions as the main library for that end of the parish, suggesting that the parish library in Franklin was not convenient.[18] Representatives

from West St. Mary Parish opposed that aid which the police jury eventually provided.

These events suggest that one impact of offshore development may have been the division of the parish into two somewhat competitive areas. This situation probably exists because of the greater economic growth in the Morgan City area as compared to the Franklin region.

A second influence of the oil industry was to create the conditions which led to the establishment of the two multi-functional port authorities mentioned above. Finally, and most general, the growth of this industry has resulted in a political atmosphere in which economic expansion or "progress" is a prime consideration in governmental policy decisions.

FOOTNOTES

[1]Library Commission, Recreation Department Commission, Municipal Auditorium Commission, Tourist Commission and Beautification Commission. The two planning commissions will be described below.

[2]The two Regional Commissions appear to have replaced the St. Mary Parish Planning Board. The only reference to this board found during the course of the research was a report entitled St. Mary Parish Resources and Facilities Published in 1949.

[3]The researchers were unable to obtain any substantial information concerning this body. Attempts to contact members of the commission in person and mailed inquiries had not been responded to at the time of writing.

[4]The creation of a Dock Board at Morgan City was one recommendation made by the St. Mary Parish Planning Board in its 1949 report (see note 2).

[5]Port of Morgan City: Port and Industrial Development Program, an economic survey prepared by Gulf Federated Consultants, Inc., 1958?.

[6]The following groups submit a list of three names each from which the governor originally appointed five Commissioners for terms of 1-5 years.

a. Berwick City Council
b. Morgan City Council
c. St. Mary Parish Police Jury
d. Berwick Lions Club
e. Morgan City Rotary Club
f. Berwick Junior Chamber of Commerce
g. Kiwanis Club
h. Morgan City-Berwick Chamber of Commerce

[7]More specifically, the appointing process is as follows:

Mayor and Council of Franklin
- 2 members for 3 year terms
- 1 member for 4 year term

Mayor and Aldermen of Baldwin
- 1 member for 2 years

St. Mary Parish Police Jury
- 2 members from Wards 1, 2, 7, and 10 for terms of 5 years and 6 years
- 2 members from Wards 3 and 4 for terms of 4 years and 5 years
- 1 member at large for a 7 year term

Successors to these original members will serve 7 year terms, in contrast to the 9 year terms for board members of the Morgan City Port Authority.

[8]Several issues which met these criteria were eliminated from consideration because it was judged that they were principally state or national policy questions.

[9]For an explanation of the two approaches see Willis D. Hawley and Frederick M. Wirt, eds., The Search for Community Power, 2nd ed. (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1974) and Terry N. Clark, ed., Community Structure and Decision-Making: Comparative Analyses (San Francisco: Chandler Publishing Company, 1968). Two well known examples of the two approaches are Floyd Hunter, Community Power Structure: A Study of Decision Makers (Garden City, New York: Anchor Books, 1963) and Robert A. Dahl, Who Governs? (New Haven, Connecticut: Yale University Press, 1961).

[10]Morgan City Daily Review, 20 June 1952, p. 1.

[11]Morgan City Daily Review, 30 May 1952, p. 1.

[12]Morgan City Daily Review, 20 June 1953, p. 1.

[13]Morgan City Daily Review, 30 May 1952, p. 1.

[14]The charter was approved by a vote of 389 to 256.

[15]Morgan City Daily Review, 23 March 1977, pp. 1, 12.

[16]Ibid., and St. Mary and Franklin Banner-Tribune, 19 October 1976, pp. 1, 6.

[17]For an examination of the economic growth policy orientations of municipalities see Oliver P. Williams, "A Typology for Comparative Local Government," Midwest Journal of Political Science 5 (May 1961): 150-164.

[18]Baton Rouge Morning Advocate, 26 August 1976, p. 12-A.

MUNICIPAL SERVICES

David Johnson, Author

Charles Durio, Research Assistant

WATER SUPPLY

Significant improvements in the water distribution and treatment systems have recently been completed in all jurisdictions serving the Morgan City region. Morgan City has built a new treatment plant and completed a new raw water intake line. St. Mary Water District Number Two and Berwick jointly constructed a treatment plant in 1961. The Patterson treatment plant was constructed in 1946, but renovated in 1964. All three systems have expanded distribution lines and storage facilities.

Morgan City.

The Morgan City water system is owned and operated by the city. The city water distribution system serves all customers within the city limits and provides water to two water districts. The first is St. Mary Parish Water District Number One which includes the Wyandotte subdivision. The remainder of Tiger Island eastward from Water District Number One is included in St. Mary Parish Water District Number Three. This district also buys water wholesale from Morgan City. The area of Amelia has been served since 1956, this including the supplying of barges with water. Stephenville, in St. Martin Parish owns its own distribution system, but customers are billed directly by Morgan City. Morgan City also supplied the needs of Berwick until 1960.

Many bonds have been issued for the purpose of improving the water system of Morgan City. The first evidence of a bond of this type was in 1912. A bond was incurred for $80,000 for both water and sewerage improvements. The next approval took place in 1941, costing $70,000 for both utilities. Table 1 lists the major bond issues passed which concern the water system. Growth of the city has required significant expansion of lines and investment in treatment plants. In 1949, a $210,000 improvement began. In 1953, Morgan City built a new water treatment plant for $179,152. From 1967 through 1971 the city, under an utilities revenue bond, made a water systems expansion totaling nearly $2,500,000. This included funds for a new treatment plant, a new intake system on Lake Palourde, and a large water main expansion program.

All water is taken from surface water sources. The Atchafalaya River is the city's main source of water. Lake Palourde is an alternate source, the intake there constructed in 1971. This source is important, as at certain times of the year, during an extremely low flow in the Atchafalaya River, salt water intrusion from the Gulf of Mexico is a problem. The raw water intakes and capacities are as follows:

Atchafalaya River:

Old Intake - one 12" line, one 14" line
three 1800 gallon per minute pumps

New Intake - one 20" line
one 2500 gallon per minute pump
one 3200 gallon per minute pump

TABLE 1

BOND ISSUES, WATER SYSTEM, MORGAN CITY

Year	Amount of Bond (in dollars)	Purpose of Bond
1912	80,000	Water and sewer improvements
1941	70,000	Water and sewer improvements
1949	210,000	Water extensions and improvements
1954	650,000	Water and electric improvements
1956	450,000	Water and electric improvements
1960	60,000	Water and gas main extensions
1961	2,100,000	Water and electric improvements
1962	1,100,000	Water and electric improvements
1967	4,125,000	Approximately $2,100,000 for water improvements
1968	2,000,000	
1969	2,500,000	
1972,1973,1974	7,600,000	Water, electric, and gas - most all earmarked for electric system

Lake Palourde:
New Intake - one 24" line
one 3000 gallon per minute pump
one 5000 gallon per minute pump

Morgan City was served by a one million gallon per day water treatment plant until 1953 when a new three million gallon per day plant was constructed. A second expansion in 1961 saw another three million gallon per day capability added. The latest addition is an eight million gallon per day plant built in 1971. These plants provide a total capacity of fourteen million gallons per day. The current estimated summer demand is less than half the total capacity. The system operates using the newest plant, with the older plants kept operational in case of an emergency.

The city has more than 2,000,000 gallons of storage capacity. The Oak Street elevated tank was added with expansion in 1949, and the Maple Street tank became a storage tank when the sedimentation basin was discontinued with the construction of a new treatment plant in 1961. Ground level storage at the plant site was also expanded. There is a total of 1,050,000 gallons of elevated storage and another 1,050,000 gallons of ground storage. In addition to these storage facilities, St. Mary Parish Water District Number Three has two elevated storage tanks. A small elevated water tank is also present in Stephenville. Table 2 lists the storage facilities currently in use.

The water distribution system in Morgan City consists primarily of water mains of six inches or more in diameter. A few small areas in the

TABLE 2

WATER SYSTEM STORAGE FACILITIES, MORGAN CITY

Location	Capacity (in gallons)	Type
Treatment plant site	500,000	Ground level
Treatment plant site	550,000	Underground storage
Maple Street	750,000	Elevated tank
Oak Street	200,000	Elevated tank
City Hall	100,000	Elevated tank
Bayou Ramos, St. Mary #3	250,000	Elevated tank
Amelia, St. Mary #3	200,000	Elevated tank
Stephenville	50,000	Elevated tank

older portions of the city are served by four inch mains. A network of mains eight inches and larger forms a system of loops encircling segments of the city. Map 1A outlines the system as it existed in the late 1940's and contrasts that extent with expansions of the system occurring up to 1970 and with the more recent construction phase of the early 1970's. It is apparent how the lesser developed area outside the city limits has been supplied with large water mains in the most recent expansion.

Expansions of plant and equipment are listed by year in Table 3. The large amount spent during the 1969-1970 expansion overshadows all previous dollar amounts. There have been water main extensions every year as the system continues to expand.

TABLE 3

ADDITIONS TO WATERWORKS, MORGAN CITY

Year	Water Main extension (in dollars)	Water Meters (in dollars)	Plant and other (in dollars)
Present in 1950	43,425	25,475	31,436
1951	4,423	4,466	17,402
1952	9,183	6,792	91,563
1953	11,384	3,244	30,381
1954	29,074	9,150	803
1955	37,916	8,388	
1956	30,381	10,543	
1957	21,515	4,250	

(TABLE 3, continued)

1958	8,354	2,989	
1959	8,977	4,431	
1960	7,088	3,231	
1961	54,786	7,122	
1962	5,654	5,126	
1963	1,949	5,944	
1964	18,161	13,197	
1965	6,928	8,474	
1966	24,898	20,415	3,387
1967	4,013	6,161	548
1968	2,015	11,203	5,095
1969	11,167	9,347	791,511
1970	1,604	4,454	1,648,645
1971	11,202	6,289	10,049
1972		34,298	
1973		22,972	
1974		36,388	
1975		26,485	
1976		15,175	

The annual operating expenses and revenues have risen as the system has grown and as the number of customers has increased. Both operating expenses and operating revenues have increased by nearly a factor of ten over the last twenty-five years. Table 4 illustrates how these values have grown in size. The waterworks has shown increasing profits over the years. These profits are, of course, exclusive of the costs for capital improvements.

TABLE 4

OPERATING EXPENSES AND REVENUES, WATERWORKS, MORGAN CITY

Year	Operating Revenues (in dollars)	Operating Expenses (in dollars)
1951	49,932	29,656
1954	68,091	58,243
1957	94,982	80,279
1960	111,470	84,491
1963	115,729	105,624
1966	150,097	136,965
1969	211,590	182,844
1972	330,797	229,660
1974	413,282	233,542
1976	435,979	292,691

The number of customers of the water system in Morgan City has increased substantially in the last fifteen years. Water system audits indicate that the number of customers has increased by approximately sixty per cent during that time interval. Available information is summarized in Table 5.

TABLE 5

CUSTOMERS, WATERWORKS, MORGAN CITY

Year	Customers
1960	2,970
1963	3,235
1966	3,691
1969	4,150
1972	4,511
1974	4,576
1975	4,740

The volume of water used in Morgan City has increased dramatically during the twenty year period from the early 1950's to the early 1970's. Usage has declined in the last four years. Table 6 details the number of gallons sold per year by the Morgan City municipal waterworks.

TABLE 6

WATER SOLD, WATERWORKS, MORGAN CITY

Year	Volume of Water Sold (in thousands of gallons)
1951	275,310
1954	526,600
1957	587,300
1960	663,890
1963	733,465
1965	855,283
1968	1,220,257
1970	1,267,860
1972	1,606,006
1974	1,292,163
1976	1,167,364

Patterson.

The Patterson water system serves the town of Patterson. Until 1960, the system also provided water to the Bayou Vista area (Waterworks District Number Two). A small section of southeast Patterson was served by the waterworks until the lines were purchased by Patterson in 1974. The original water treatment plant was built in 1946 and renovated in 1964. The capacity was 350,000 gallons per day. Water treatment facilities were expanded in 1976 to accommodate 1,500,000 gallons per day. Water is obtained from the Bayou Teche. Water is pumped via one 350 gallon per minute pump and one 500 gallon per minute pump. There are two ground storage wells at the treatment plant with capacities of 275,000 gallons and 75,000 gallons. The system also has one elevated storage tank with a capacity of 300,000 gallons which was constructed in 1964. The distribution system in Patterson is considered inadequate. Many of the water mains are 1, 2, and 4 inch pipes, too small to provide satisfactory fire protection.

Table 7 compares revenues and expenses for the combined Sewerage and Water Department. The large increase in revenue in 1975 is due to the addition of the area in southeast Patterson. The lines were purchased from Waterworks District Number Two at a cost of $75,000.

TABLE 7

OPERATING REVENUES AND EXPENSES,
WATER & SEWERAGE, PATTERSON

Year	Revenues (in dollars)	Expenditures (in dollars)
1959	32,658	31,198
1961	33,125	28,785
1964	37,305	38,778
1967	45,230	52,434
1974	80,137	55,169
1975	120,620	56,616

Growth in the Patterson water system can be seen through bonds which have been issued. Table 8 provides a summary of those bonds and delineates their primary purpose. Table 9 lists additions and improvements to the water system. Several major expansions can be noted.

Berwick.

Prior to 1960 Berwick had its water supplied by Morgan City. When the original water distribution system was installed in Berwick, the town

TABLE 8

BOND ISSUES, WATER SYSTEM, PATTERSON

Year	Amount of Bond (in dollars)	Purpose of Bond
1956	225,000	Sewer, water, and gas (very little for water)
1964	350,000	Water and gas (major water line extensions and storage tank)
1973	771,000	Water, sewer, and gas (primarily for water treatment plant)

TABLE 9

ADDITIONS TO WATER SYSTEM, PATTERSON

Year	Treatment Plant	Water Lines (in dollars)	Other
1943	30,000		
1948	69,671		
1955	17,264		
1956	4,608		
1961	3,856		
1962	28,918		
1963	2,633		4,208
1965		116,577	94,735
1967		47,161	
1968		134,539	
1970		108,902	348
1971		503	1,044
1973			3,263
1975		10,497	75,000

made arrangements with Morgan City to purchase water. An eight inch transmission main was attached to the Long-Allen highway bridge across Berwick Bay. As both Morgan City and Berwick grew in population, it finally became apparent to the Morgan City officials that their own needs for water would make it necessary to terminate their agreement to supply Berwick with water. Finally in 1960 Berwick was requested to make other arrangements to meet their water needs.

At about this same time, it was becoming apparent to the town of Patterson that they could no longer supply the Bayou Vista area (Waterworks District Number Two) with water. Berwick and Waterworks District Number Two agreed in 1960 to construct a water treatment plant to serve both Bayou Vista and Berwick. Agreements were executed stipulating that the town of Berwick would bear two-thirds of the construction cost, and in return, be entitled to two-thirds of the output of treated water from the plant. Bayou Vista thus received the remaining one-third. This arrangement was altered recently to provide for an equal sharing in the costs and output. This was necessitated by the more rapid growth of Bayou Vista.

The water treatment plant constructed in 1961 is capable of producing 2,000,000 gallons of treated water daily. The plant is currently being renovated to increase the available capacity. In case of emergency needs the line between Morgan City and Berwick is still intact, and the Bayou Vista system is still connected to the Patterson system.

The raw source for the treatment plant is Bayou Teche, the intake located approximately one-half mile north of the plant. Two pumps at this intake transport water to the treatment plant. These raw water pumps transport water through a single twelve inch line.

After 1956, the revenues and expenses for the waterworks and gas utility are combined. These combined totals are found in Table 10. It is apparent that operating revenues have continually exceeded operating expenses.

Major expansions and extensions are noted for the Berwick water system in Table 11. In recent years it has not always been possible to separate expenditures for gas and water improvements.

Bayou Vista.

Waterworks District Number Two was created in 1953. The water supplied to this area of Bayou Vista came from Patterson. As the Bayou Vista area became more densely settled, the demand for water increased and in 1960 the decision was made to unite with Berwick for purposes of constructing a water treatment plant. The growth in the Bayou Vista area can be seen as the number of customers dramatically increased. Table 12 notes how the number of gallons sold and the value of those sales has increased for Waterworks District Number Two. The slight decline in gallons sold from 1973 to 1975 reflects the sale of a portion of the district located in Patterson to that town's water system during 1974.

Bayou Vista has two elevated storage tanks with capacities of 200,000 gallons and 500,000 gallons. The 2,000,000 gallon per day treatment facility is shared with Berwick.

TABLE 10

OPERATING REVENUES AND EXPENSES
WATERWORKS AND GAS, BERWICK

Year	Revenue (in dollars)		Expenditures (in dollars)	
	Water	Gas	Water	Gas
1950	10,451	23,000	5,947	7,873
1953	13,234	40,451	9,001	17,314
1956	18,862	52,285	16,306	35,325
1959	123,101		93,794	
1962	143,324		89,523	
1965	155,386		82,358	
1968	173,026		105,108	
1970	180,414		140,430	
1974	219,327		152,862	
1975	234,171		165,947	

TABLE 11

ADDITIONS TO WATER SYSTEM, BERWICK

Year	Water Lines (in dollars)	Treatment Plant (in dollars)	Other (in dollars)
1937	9,470		
1947	40,000		
1953	2,187		
1954	726		
1955	952		
1956	1,143		
1957	12,266		447
1958	7,032		
1959	677		5,171
1960			11,695
1961	36,932	319,341	8,447
1962	6,876**	948	7,959
1963	2,282**	2,025	3,414
1964	1,619**		
1965	42,495**		3,730
1966	21,737**		
1967	1,536**		
1969			2,585

(TABLE 11, continued)

1970	10,955**	
1972	23,041**	2,528

**Combined total for Water and Gas Lines

TABLE 12

WATER SOLD, WATERWORKS DISTRICT NUMBER TWO

Year	Gallons	Value (in dollars)
1955	8,171,576	8,132
1958	24,244,200	23,062
1961	40,735,300	38,547
1964	71,572,700	67,670
1967	119,336,600	89,407
1970	154,647,500	106,388
1973	175,742,300	159,147
1974	175,710,700	157,425
1975	163,842,500	159,055

GAS UTILITY

Morgan City, Berwick, and Patterson each have a municipal gas department. The distribution system is owned and maintained by the municipalities. The natural gas is supplied by Texaco. The systems have been expanded over the last twenty-five years, but at less expense than the other municipal utilities.

Morgan City.

Morgan City has passed a series of bond issues for the purpose of expanding and improving its gas distribution system. Table 1 lists the bond issues passed and their respective amounts. The largest expansions were seen in 1949 and during the late 1960's. The expansion of the gas system in 1970 saw a new transmission line built. An eight-inch transmission line extending from the Texaco point of delivery to the City's steam power plant was constructed. This line thus crosses both the Atchafalaya River and Bayou Boeuf. The previously existing four-inch main, running through Berwick and suspended on the Atchafalaya River

TABLE 1

BOND ISSUES, GAS SYSTEM, MORGAN CITY

Year	Amount of Bond (in dollars)	Purpose of Bond
1949	460,000	Gas system improvements
1960	60,000	Gas and water improvements
1967	4,125,000	Approximately $500,000 for the gas system
1968	2,000,000	
1969	2,500,000	
1972,1973,1974	7,600,000	Most funds earmarked for electric system improvements

highway bridge was operating at pressures generally considered above normal. Intermediate pressure mains were also constructed as well as new regulator stations. The entire expansion totaled over $500,000. Additions to the gas system are outlined in Table 2. The significant expansion in 1970 is evident.

Operating revenues and expenses of the gas utility have grown substantially over the last twenty-five years. Costs have risen the most dramatically in the last two years as the price of natural gas has increased substantially. From 1970 to 1974 the actual volume of natural gas purchased decreased. In 1970 purchases totaled 2,249,420,000 cubic feet of gas. The comparable figure for 1974 was 2,242,392,800 cubic feet. Thus, the volume remained nearly constant, while the cost of natural gas purchases increased from $487,031 in 1970 to $1,171,806 in 1974. Table 3 presents the operating revenues and expenses from 1950 through 1975. The amount of the expenditures which are direct natural gas purchases are noted. In recent years the operating revenues have only narrowly exceeded the operating expenses.

The number of customers in the Morgan City gas system has increased over seventy-five per cent from 1960 to 1976. That increase has been at a much slower rate during the 1970's. Morgan City also sold gas to Berwick at cost until 1963. Table 4 lists the number of customers in Morgan City from 1960 to 1976.

Patterson.

Patterson owns its gas distribution system. It purchases natural gas from Louisiana Intrastate Gas Company, a division of CLECO. This system serves both Patterson and Bayou Vista. Built during the early 1950's, Patterson's natural gas system was significantly expanded in 1965.

TABLE 2

ADDITIONS TO GAS SYSTEM, MORGAN CITY

Year	Extensions	Meters (in dollars)	Regulators	Other
Present in 1951	495,679	4,039		1,438
1952	19,055	9,162	1,567	
1953	10,365	4,471	1,746	3,403
1954	43,851	6,280	2,945	3,451
1955	21,943	8,997	1,862	259
1956	11,205	7,037	2,500	
1957	20,106	10,928	863	1,053
1958	24,770	3,545	1,344	775
1959	1,831	5,980	1,308	6,122
1960		9,238		1,048
1961	44,081	7,098	2,024	3,754
1962	20,024	4,198	641	18,807
1963	44,937	5,880	1,197	8,000
1964		55,919		5,625
1965	56,669	8,304	1,502	548
1966	46,367	8,964	2,579	4,313
1967	39,987	5,540	2,124	515
1968	19,177	8,910	650	2,420
1969	37,672	3,375	739	9,004
1970	224,657	13,368		
1971	15,104	3,012		
1972		20,790		
1973		11,268		
1974		30,704		
1975		21,232		
1976		34,044		

TABLE 3

OPERATING REVENUES AND EXPENSES, GAS, MORGAN CITY

Year	Operating Revenues (in dollars)	Operating Expenses (in dollars)	Natural Gas Purchases (in dollars)
1950	44,630	27,849	15,091
1952	156,565	86,421	53,554
1954	209,619	129,312	68,812
1956	252,484	127,808	71,926
1958	322,984	161,873	89,437
1960	372,937	138,402	77,880
1962	387,219	160,115	75,610
1964	496,999	321,805	237,953
1966	563,497	410,715	297,094
1968	650,708	419,547	300,479
1970	877,086	689,337	487,031
1972	868,309	795,309	543,420
1974	1,530,451	1,495,053	1,171,806
1975	2,372,348	2,260,870	2,008,360

TABLE 4

CUSTOMERS, GAS UTILITY, MORGAN CITY

Year	Customers
1960	3,059
1962	3,402
1964	3,671
1966	4,132
1968	4,538
1970	4,733
1972	5,189
1974	5,250
1976	5,413

Bond issues concerning the gas system have been incorporated into several issues which provided funds for utility operations. Table 5 notes the bond issues and their amounts.

TABLE 5

BOND ISSUES, GAS, PATTERSON

Year	Amount of Bond (in dollars)	Purpose of Bond
1956	250,000	Water, gas, and sewer (mostly for sewer)
1964	350,000	Water and gas (both major water improvements and gas line extensions)
1973	771,000	Water, gas, and sewer (primarily water treatment plant)

Operating revenues and expenditures of the Patterson gas utility have risen continually. Increases are documented in Table 6.

TABLE 6

OPERATING EXPENSES AND REVENUES, GAS, PATTERSON

Year	Revenues (in dollars)	Expenditures (in dollars)
1959	76,310	44,847
1962	99,794	67,367
1965	143,158	85,816
1967	157,570	95,840
1974	212,845	117,273
1975	241,466	175,045

The number of customers served by the Patterson gas utility has increased in recent years. Table 7 notes the number of customers in both Patterson and Bayou Vista served by this utility.

The Patterson gas system was constructed during the early 1950's. Expansions and improvements have taken place since that time, with the largest extension of gas lines occurring in 1965. Table 8 notes the sequence and extent of each improvement made to the system.

TABLE 7

CUSTOMERS, GAS, PATTERSON

Year	Customers
1962	1,517
1964	1,866
1966	2,021
1975	2,602

TABLE 8

ADDITIONS TO THE GAS SYSTEM, PATTERSON

Year	Gas System Improvements (in dollars)	Equipment (in dollars)
1950-1954	140,382	
1955	14,079	
1962	16,262	
1963	24,457	859
1965	167,366	
1966	5,745	
1967	17,400	
1969	16,947	
1970	16,421	5,300
1971	4,308	6,579
1972		2,771
1973		3,568
1974		6,718

Berwick.

Berwick owns its own gas distribution system. It purchases gas from Texaco. It was purchased through Morgan City until 1963. The number of customers has nearly doubled since 1950. Table 9 shows that the number of customers has decreased slightly in recent years.

The operating expenses of the gas utility are combined with the waterworks and data on expenses and revenues are listed under the discussion on water supply. The major part of the gas system was installed in 1948 at a cost of $210,468. Expansions have occurred since that time, particularly in 1955. Recent expansion costs are again listed with the section on water supply.

TABLE 9

CUSTOMERS, GAS, BERWICK

Year	Customers
1950	513
1952	608
1954	700
1956	790
1958	895
1960	968
1962	1,003
1964	1,023
1966	1,044
1975	1,008

ELECTRIC UTILITY

Morgan City has its own power plants and supplies its needs through a municipal power system. This system has been expanded many times over the last twenty-five years as the needs of the citizens and industries of Morgan City have expanded. Berwick, Bayou Vista and Patterson have their power supplied by the Central Louisiana Electric Company (CLECO).

Morgan City.

Morgan City has passed a series of bond issues for the purpose of expanding its power generating capabilities. Table 1 lists bond issues passed and their amounts. A series of three bond issues in 1967, 1968, and 1969 were passed to provide money for the entire utility system. Thus, these bonds of $8,625,000 were to help finance improvements in the electric, water and gas systems. Approximately one-half of this total was used by the electric utility. Another series of three bond issues dated 1972, 1973, and 1974 was likewise for the benefit of all three municipal utilities. Most of the $7,600,000 was earmarked for the electric department.

The oldest generating unit still used was installed in 1938. This, and other diesel generating units were installed to increase the capacity of the system. Additional units were put into service in 1942, 1947, 1952, 1954, 1956, and 1958. These had a total installed kilowatt capacity of 10,100. This capability was more than doubled with the installation of two steam powered units in 1963. With the power plant expansion in 1970 this capacity was again nearly doubled, bringing the total capability to over 40,000 kilowatts. The new expansion in 1973 has again drastically improved the power generating ability of the Morgan City electric utility.

TABLE 1

ELECTRIC BONDS, MORGAN CITY

Year	Amount of Bond (in dollars)	Purpose of Bond
1954	650,000	Electric and water
1956	450,000	Power plant expansion
1961	2,100,000	Electric and water
1962	1,100,000	Electric and water
1967	4,125,000	Approximately $4,900,000 for electric
1968	2,000,000	
1969	2,500,000	
1972	2,900,000	Approximately $7,400,000 for electric
1973	3,500,000	
1974	1,200,000	

Additions to the Morgan City electric system have been numerous. New power generating units have been added periodically. Significant amounts have also been spent each year for transmission lines, electric meters, and transformers. Table 2 details the expansions which have occurred to the electric utility since 1950. The cost of this expansion exceeds $18,000,000 over this twenty-five year period.

The operating expenses of the electric system have increased dramatically. From only $181,056 in 1951, costs have soared to $3,712,065 in 1976. The cost of production has, of course, risen as inflation has its effect, but the increase is also due to a large increase in production. As operating expenses have risen, so too have operating revenues. The electric utility has consistently shown a good profit. Table 3 shows the operating revenues and expenses of the electric utility. One component of the operating expenses is detailed. The amount of power purchased from other sources is noted. After the power plant expansion in 1970 this amount has been quite insignificant. The amount of power purchased increased prior to the two additions in generating capability in 1964 and 1970.

The number of customers of the Morgan City electric system has grown consistently until 1974. Table 4 notes that the number of customers has increased by nearly 2,000 in the last fifteen years. Table 5 shows how electric consumption has changed. The number of kilowatt hours produced has increased more than ten-fold over the last twenty-five years. It has only been since 1972, and the push for conservation, that the output has declined slightly.

TABLE 2

ADDITIONS TO ELECTRIC UTILITY, MORGAN CITY

Year	Plant Expansion (in dollars)	Transmission lines, Electric meters, & Transformers (in dollars)
Present in 1950	553,946	195,241
1951	17,943	28,037
1952	169,929	47,366
1953	9,068	28,615
1954	539,328	102,675
1955	7,328	64,381
1956	442,812	55,925
1957	8,910	51,911
1958	239,861	33,547
1959	5,733	53,119
1960		76,516
1961	22,932	33,731
1962	1,141	44,721
1963	1,013	53,431
1964	3,066,984	73,133
1965	37,425	146,816
1966		147,137
1967	7,836	163,675
1968		176,013
1969		80,632
1970	3,931,722	134,898
1971	6,764	112,952
1972	249,991	159,571
1973	5,353,370	175,279
1974	1,726,134	224,717
1975	371,720	146,272
1976	10,786	155,670

TABLE 3

OPERATING REVENUE & EXPENSES, ELECTRIC, MORGAN CITY

Year	Operating Revenue (in dollars)	Operating Expenses (in dollars)	Power Purchased (in dollars)
1951	331,692	181,056	
1954	472,734	224,385	
1957	751,946	383,789	
1960	923,931	471,757	32,462
1962	1,061,150	597,645	152,142
1964	1,218,600	750,345	5,796
1966	1,580,752	934,570	51,943
1968	1,902,029	1,161,915	87,553
1970	2,297,780	1,456,521	9,762
1972	2,849,026	1,522,887	4,372
1974	3,434,963	2,148,671	1,673
1976	5,031,872	3,712,065	6,073

TABLE 4

CUSTOMERS, ELECTRIC UTILITY, MORGAN CITY

Year	Number of Customers
1960	4,635
1962	4,998
1964	5,158
1966	5,665
1968	5,923
1970	6,375
1972	6,567
1974	6,728
1976	6,374

TABLE 5

POWER SOLD, ELECTRIC UTILITY, MORGAN CITY

Year	Electric Power Sold (millions of kilowatt hours)
1951	11,211.9
1954	15,728.7
1957	23,490
1960	34,729
1963	50,173
1965	67,875
1968	95,140
1970	103,407
1972	150,674
1974	148,977
1976	145,113.8

Berwick and Patterson.

Electric power is supplied to Berwick, Patterson, and the Bayou Vista area by Central Louisiana Electric Company (CLECO). Neither of the municipalities of Berwick or Patterson own the distribution system and, thus, need not directly provide monies for construction and maintenance of the system. These costs do, of course, eventually find their way into the price charged the consumer.

SEWERAGE

The treatment of sewage has been done on only a very limited scale within the Morgan City area. Patterson treats its sewage, but the entire area is still in the process of constructing adequate sewage treatment facilities. Patterson, Berwick, and the St. Mary Sewerage District Number Two (Bayou Vista area) are jointly constructing a treatment facility, while Morgan City has also embarked the design of a large treatment plant. Presently, Berwick, Bayou Vista, and Morgan City all dump untreated sewage into the neighboring waterways.

Morgan City.

Untreated sewage is currently being discharged into Bayou Boeuf. Federal water pollution standards require the treatment of municipal sewage and, thus, Morgan City has begun the process of designing and constructing a treatment plant. At a cost in excess of $9,000,000 the project represents one of the larger monetary undertakings of the city. The basic financing of this system is derived from a 0.75 per cent St. Mary Parish sales tax.

The purpose of this special tax from the parish is to disburse such amounts for construction, acquisition, extension, improvement, operation, and maintenance of solid waste collection and disposal facilities, sewer and sewerage disposal works and other facilities for pollution control and abatement and to pay debt service requirements on bonds issued for such purpose. The fund had a total of $108,887 in 1974 and after engineering expenses of $50,580 in 1975 still had a balance of $309,725 at the end of 1975.

Past expenditures for improvements in sewerage collection have been limited in extent. The dollar investment is significantly lower than the other municipal utilities. Bond issues for the purpose of sewerage improvements are listed in Table 1. Two early bonds contained expenditures for both the water and sewer system. Large scale sewerage expansions resulted from the bonds passed in 1949 and 1960.

TABLE 1

SEWERAGE BOND ISSUES, MORGAN CITY

Year	Amount of Bond (in dollars)	Purpose of Bond
1912	80,000	Sewer and water improvements
1941	70,000	Sewer and water improvements
1949	323,000	Sewer system improvements
1955	25,000	Sewer lift station
1960	400,000	Sewer system improvements

Operating expenses of the Sewerage Department can be estimated in several years. The combining of sewerage and streets into a single department makes detailing difficult for several years. Operating expenses (estimates where necessary) are shown for the Morgan City Sewerage Department in Table 2. Expenses have gradually risen over the past decades.

A newly created Sewerage District Number One now serves Morgan City and what was formerly the St. Mary Sewer District Number One, serving the Wyandotte and Walsh subdivisions. The Sewerage District Number One includes all of the area within the city limits of Morgan City, as well as all of the developed and undeveloped areas of Ward 6 lying between Lake Palourde on the north, Bayou Ramos on the east, and Bayou Boeuf on the south. This encompasses approximately 4,500 acres.

The major portion of the Morgan City sewerage collection system is made up of eight-inch lines. Local sewer service connections are connected to gravity flow lines. Due to the flat topography of the land, however, lift or pumping stations are needed periodically. There are twenty-two sewage

TABLE 2

OPERATING EXPENSES, SEWERAGE DEPARTMENT, MORGAN CITY

Year	Operating Expenses (in dollars)
1953	26,000
1955	16,000
1957	12,000
1959	34,000
1961	43,000
1973	60,977
1974	87,000
1975	93,500

lift or pumping stations in the collection system. All of the sewage is eventually discharged into Bayou Boeuf near the end of Third Street. At present there are approximately 55 miles of sewer mains.

Berwick.

The sewerage system in Berwick does not presently include any treatment facilities. Two pumping stations adjacent to the Atchafalaya River are used to pump sewage over the levee and into the river. The system contains gravity flow lines and uses pumping stations where necessary. The Country Club Estates subdivision utilizes a sewage lagoon within its separate system. Berwick has currently entered into an agreement with Patterson and the St. Mary Parish Sewerage District Number Two for the construction of a joint facility to handle solid and liquid waste. This treatment facility is funded primarily through the 0.75 per cent St. Mary Parish sales tax. Each of the three jurisdictions contributed $39,066 toward engineering services in 1975.

Three bond issues have been passed for the purpose of improving the sewerage collection system. The amounts are listed in Table 3. The operating expenses of the Sewerage Department in Berwick have continually risen over the last two decades. Revenues have also slowly risen. Table 4 details these revenues and operating expenses for Berwick.

Bayou Vista.

The sewerage system in the Bayou Vista area has no treatment plant. Sewage is pumped into the Atchafalaya River. The system was constructed in 1960. This area, St. Mary Sewerage District Number Two, is currently joining with Berwick and Patterson to construct a sewage treatment plant.

TABLE 3

BOND ISSUES, SEWERAGE, BERWICK

Year	Amount of Bond (in dollars)	Purpose of Bond
1948	90,000	Sewer improvements for Sewerage District No. 1 (Berwick)
1956	85,000	Sewer improvements
1965	37,000	Sewer improvements

TABLE 4

OPERATING EXPENSES, REVENUES, SEWERAGE, BERWICK

Year	Operating Expenses (in dollars)	Operating Revenues (in dollars)
1950	738	1,648
1953	494	1,840
1959	3,127	718
1962	4,796	5,961
1965	5,824	19,265
1968	8,724	21,148
1972	12,258	23,469
1974	18,423	23,629
1975	21,724	24,258

Patterson.

The Patterson sewerage system has a treatment and disposal plant. The original sewerage system dates back to the middle 1950's. The treatment plant, part of the original 1954 system, was designed as a trickling filter plant. The capacity was 400,000 gallons per day. After two decades of use, however, the practical capacity is 350,000 gallons per day. In 1970 the plant was renovated by repairing the trickling filter arms, replacing pumps, and installing sludge collectors in the final settling basin. Treated sewage is discharged from the plant into the Taft Street drainage canal and then into Dynamite Canal. The capacity is taxed during times of heavy rainfall. With large amounts of drainage water infiltrating into the sewerage system, this occasionally necessitates the discharge of raw, untreated sewage into the drainage canal. Patterson is now contributing to a joint undertaking with Berwick and the St. Mary Sewerage District Number Two for the construction of a large sewage treatment plant.

Operating expenses for the Sewerage Department in Patterson are difficult to determine in early years as expenditures for the Sewerage and Water Department are listed as one total. Table 5 lists the expenditures and revenues where available. Patterson has only recently levied a sewerage service charge. As of 1975 the Patterson sewerage system served 2,678 customers.

TABLE 5

OPERATING EXPENSES AND REVENUES, SEWERAGE, PATTERSON

Year	Operating Expenses (in dollars)	Operating Revenues (in dollars)
1959	(31,198)*	0
1970	15,000	0
1974	22,639	1,405
1975	22,845	16,070

*Sewerage and Water

Bond issues for utility improvements have been issued with the combined purpose of funding sewer, water, and natural gas projects. Table 6 notes these projects, as well as those exclusively for sewer construction.

TABLE 6

BOND ISSUES, SEWERAGE, PATTERSON

Year	Amount of Bond (in dollars)	Purpose of Bond
1956	225,000	Sewer, water, and natural gas (mostly sewer)
1959	35,000	Sewer construction
1967	145,186	Sewer construction
1974	771,000	Sewer, water, and natural gas (mostly water)

Expansions to the sewerage system have been made since its inception in the 1950's. Table 7 lists the major additions to the sewerage system.

TABLE 7

ADDITIONS TO SEWERAGE SYSTEM, PATTERSON

Year	Amount	Purpose
1958	126,754	Sewerage treatment plant
1958	249,818	Sanitary sewer system
1960	32,143	Additions to sewer system
1967	26,770	Improvements to sewer system
1970	129,433	Improvements to sewer system
1970	44,413	Disposal plant
1970	3,230	Equipment
1971	500	Equipment
1974	2,726	Sewer extensions

SOLID WASTE

Historically, solid waste in the Morgan City area has been disposed of through the use of open dumps and incinerators. With the advent of stricter pollution standards in the 1970's and the existence of greater quantities of solid waste, improved methods of disposal are now being financed.

Morgan City.

Morgan City currently disposes of its solid waste through the use of an open dump. During the 1950's and 1960's an incinerator was utilized. The quantity of garbage became too much for an incinerator to handle by the late 1960's and, thus, Morgan City returned to the open dump method. Morgan City has just recently entered into a contract with other jurisdictions to build a disposal plant which would utilize a shredder.

The expense of collecting and disposing of garbage has risen substantially over the last several decades. Statistics are difficult to interpret as garbage collection and disposal has historically fallen under the Parks, Sanitation, and Cemetery Department. Expenditures have been isolated for sanitation where possible to give an indication of the rapid rise in cost for this service. Table 1 indicates the salaries received by the entire sanitation section of the department. These salaries went primarily toward garbage collection, but during certain years significant funds have gone toward spraying the city. A separate total is given for 1974 indicating the operating expenses of the Sanitation Department.

Capital investment in vehicles is listed in Table 2. These purchases consist primarily of garbage trucks. Table 3 indicates the income from garbage collection which has accrued to Morgan City. Income has consistently risen, but certainly has not come close to matching the expenditures required for its collection.

TABLE 1

SOLID WASTE OPERATING EXPENSES, MORGAN CITY

Year	Salaries - Sanitation Dept. (in dollars)	Total Operating Expenses - Parks, Sanitation, Cemeteries Dept. (in dollars)	
1952	19,281	33,252	
1955	38,698	48,928	
1958	47,400	69,766	
1961	97,544	138,261	
1964	99,757	143,502	
1967	162,336	241,816	
1972	175,324	221,624	Sanitation only
1974	206,802	324,205	(251,497)

TABLE 2

VEHICLE PURCHASE, SANITATION DEPARTMENT, MORGAN CITY

Year	Vehicle Purchases (in dollars)
1955 - 1959	17,918
1960 - 1964	8,825
1965 - 1969	29,398
1970 - 1974	14,082

TABLE 3

INCOME FROM GARBAGE COLLECTION, MORGAN CITY

Year	Income (in dollars)
1960	1,404
1964	5,184
1968	5,656
1970	7,709
1972	10,303
1974	14,007
1975	16,959

Berwick and Patterson.

Both Berwick and Patterson utilize open dumps to dispose of trash and garbage. Patterson collects for the Bayou Vista area, and as of 1975 had 2,853 customers. Berwick, Patterson, and the Bayou Vista area have entered into an agreement for the construction of a solid waste disposal system. Engineering studies have already been undertaken.

Income from garbage collection in Patterson has risen over the last decade. Expenditures are difficult to compare as before 1966 all salaries were shown separate from departmental expenses. Table 4 provides available comparisons.

TABLE 4

GARBAGE DEPARTMENT, EXPENSES AND INCOME, PATTERSON

Year	Expenditures (in dollars)	Income (in dollars)
1959	0*	12,000 (estimate)
1963	219*	19,457
1966	493*	33,829
1974	50,934	52,469
1975	51,845	53,533

*Does not include salaries

The expenditures of the Berwick Sanitation Department have been rising dramatically. Table 5 notes the change in costs for operating expenses and equipment. Berwick does not charge for garbage collection within its city limits.

TABLE 5

EXPENSES, SANITATION DEPARTMENT, BERWICK

Year	Expenditures (in dollars)
1950	897
1953	1,885
1956	3,395
1959	6,563
1963	14,974

(TABLE 5, continued)

1967	36,806
1974	42,457
1975	50,988

RECREATION

Recreation programs and facilities are an important component of a city or an urban region. Within the Morgan City area significant steps have been taken over the last decade to meet the increasing need for leisure-time activities. Emphasis is here placed upon developed recreational sites and their programs. Note must also be made, however, of the opportunities for outdoor experiences available outside of the confines of such facilities. Morgan City has developed facilities which represent large capital investments. The remaining area of the region has expended very little in comparison with Morgan City.

Morgan City.

Morgan City has acquired additional recreational acreage as the population has expanded over the last twenty-five years. Recreation sites have been developed, new land purchased, and available land set aside for future consideration. Table 1 lists the developed sites in Morgan City and the types of recreational use available at each. It is apparent that a wide variety of sports facilities exist. Other uses, such as picnicking, are more limited, however, as many of the locations noted are upon school grounds.

The most significant development in the last ten years is the construction of the Recreation Complex. The total cost is in excess of $1,200,000. With construction of the new expressway through Morgan City, the existing recreation building and swimming pool had to be relocated. Therefore, much of the funding for the new complex was provided by state monies. The swimming pool (15,000 square feet) represents a significant expansion of such facilities in Morgan City. It is nearly twice the size of the pool it replaces. The pool is open to those of the entire region and thus serves a broader population than Morgan City. Swamp Gardens is located adjacent to the Recreation Complex and has been developed primarily as a tourist attraction. The garden features a small swamp with native plants and wildlife exhibited in their natural habitat. Area still remains around the Recreation Complex to accommodate future expansion as funds become available.

Lake End Park is the other major public recreation site in the Morgan City region. On the shore of Lake Palourde, and covering over 37 acres, space is provided for picnicking, swimming, boating, waterskiing, and

TABLE 1

RECREATION SITES, MORGAN CITY

Site	Acreage	Facilities
Lake End Park	37.1	Playground, picnic, boat ramp
Little League Park	5.2	Baseball, grandstand
Shaw Tract	5.2	Baseball, football, grandstand
Spinella Park	2.1	Baseball, grandstand
Lawrence Park	2.8	Basketball, tennis, playground, picnic
Norman Park	4.4	Baseball, football
Greenwood Park	.4	Picnic
Jacquet Park and School	7.7	Pool, baseball, basketball, grandstand
Swamp Gardens	2.7	Nature walk
Recreation Complex	4.0	Pool, baseball, tennis, playground, picnic, grandstand
Bowman Park		
Evans Park		
Sumter Williams School	5.2	Baseball, basketball
M.E. Norman School	5.0	Baseball
Maitland School	5.0	Basketball, playground
Shannon School	3.8	Baseball, basketball
Wyandotte School	5.3	Baseball, basketball
Morgan City Jr. High	16.5	Baseball, football, basketball, grandstand
Morgan City Sr. High	15.1	
Young's Voc.-Tech. School	6.2	Picnic
C. Catholic High	14.0	Baseball, football, basketball

other water-related activities. The site features a boat ramp, with a second nearby.

Several smaller parks are located within Morgan City. Improvements were made to several during the late fifties and the early sixties, particularly in the form of baseball diamonds, tennis courts, bleachers, and the general upgrading of sites. Additional playground land is found in association with the public schools. Many playfields are equipped for baseball and basketball, the larger schools often having football fields and sports grandstands. Many of these schools have summer recreation programs.

The generally accepted standard of one acre of recreational land for each 100 persons illustrates the need for additional recreational land. Morgan City with approximately 150 acres (including all school playgrounds) would thus be adequate for a population of 15,000. That figure was reached within the city limits over a decade ago. When it is realized that several

of the facilities serve a regional population, the amount of land seems even more inadequate. Fortunately, additional land for development does exist in conjunction with the Recreation Complex. Additional small parcels of land are present from the rights-of-way under the new freeway bridge construction. This area offers potential for recreational land.

Over the past several decades expenditures on recreation have consistently increased. The Recreation Improvement Fund has served as the primary funding vehicle. Table 2 lists expenditures from this fund. The current level of spending allows a full-time superintendent for recreation and an extensive recreation program. From an expenditure of only $12,604 in 1950, the values have risen to $74,690 in 1970 and $190,917 in 1975. Costs have risen more rapidly in recent years, particularly with the completion of the Recreation Complex.

TABLE 2

RECREATION FUND EXPENDITURES, MORGAN CITY

Year	Expenditures (in dollars)
1950	12,604
1952	13,074
1954	17,110
1956	17,466
1958	18,719
1960	23,279
1962	29,500
1964	34,246
1966	50,044
1968	57,840
1970	74,690
1972	99,359
1973	108,952
1974	175,613
1975	190,917

Improvements to existing facilities has required increasing expenditures. Significant sums have been spent in recent years on tennis and basketball facilities. Some of the expenses were due to developing the Recreation Complex, but funds have been expended for most of the municipal park sites. Table 3 summarizes the expenditures upon improvements to the recreation system in Morgan City. Two bond issues have also been passed for the construction of swimming pools. An 8,000 square foot pool was built in 1953 from a $160,000 bond issue. This pool has since been replaced by the new pool in the Recreation Complex. A second pool was built in 1958 after the passage of a $95,000 bond. It is a smaller pool, 4,500 square feet in size.

TABLE 3

RECREATION SYSTEM IMPROVEMENTS, MORGAN CITY

Year	Expenditures on Improvements (in dollars)
1950 - 1954	8,061
1955 - 1959	7,537
1960 - 1964	6,908
1965 - 1969	15,723
1970 - 1975	111,470

Berwick, Patterson, and Bayou Vista.

Limited recreation facilities are found within the three communities of Berwick, Patterson, and Bayou Vista. One finds a small municipal park within each of these three areas. Pharr Memorial Park within Berwick, Bayou Vista Park in Bayou Vista, and the very small Main Street Park in Patterson represent the major municipal recreational land. Table 4 summarizes the recreational land found. Additional playground land is found in association with the public schools. The Bayou Vista Park has been a relatively recent addition as that community has expanded. A significant piece of land has been developed adjacent to the Country Club Estates subdivision (now incorporated into the town of Berwick), called the St. Mary Golf and Country Club. A small park also exists within the Country Club Estates subdivision in Berwick.

TABLE 4

RECREATION SITES, BERWICK, PATTERSON, BAYOU VISTA

Site	Acreage	Facilities
Berwick:		
Pharr Memorial Park	6.0	Baseball, tennis, playground grandstand
Russo Park	3.0	Playground
Steward Park	.2	Playground
Mahfouz Park	.2	Playground
Country Club Park	.7	Playground
St. Mary Golf & Country Club	67.0	Golf
Patterson:		
Main Street Park	1.0	Playground
Bayou Vista:		
Bayou Vista Park	5.5	Baseball, playground

Berwick's expenditures within the recreation department have varied considerably over the last several decades. After $11,917 was spent in 1967, this figure dropped to only $2,814 in 1972. Table 5 provides some illustrative data on expenditures of the Berwick recreation department. The 1975 outlay increased dramatically with the hiring of a person to supervise the recreational program. Table 6 provides a comparison of the nature of the costs within the department. The increase in the amount spent on wages from 1974 to 1975 is evident.

TABLE 5

EXPENDITURES, RECREATION, BERWICK

Year	Expenditures (in dollars)
1950	0
1953	95
1957	150
1959	551
1962	2,988
1965	3,961
1969	7,284
1972	2,814
1974	4,963
1975	32,595

TABLE 6

EXPENSES BY TYPE, RECREATION, BERWICK

Type	1965	1974 (in dollars)	1975
Wages	923	611	10,845
Maintenance	1,605	1,435	3,219
Equipment, Misc.	1,433	2,552	18,243

Patterson has had a very small budget for its recreation department. Expenditures were separately allotted to this department beginning in 1963. In recent years the amounts have increased substantially, this attributable to supplies and equipment and not to salaried personnel. Table 7 notes operating expenses by year and Table 8 the nature of the expenses within the department.

TABLE 7

EXPENDITURES, RECREATION, PATTERSON

Year	Expenditures (in dollars)
1959	0
1962	0
1964	952
1967	1,888
1974	10,284
1975	10,833

TABLE 8

EXPENSES BY TYPE, RECREATION, PATTERSON

Type	1974	1975
	(in dollars)	
Salaries	872	765
Supplies & Equipment	6,792	6,341
Maintenance	939	2,171

Undeveloped Sites.

Within St. Mary Parish there are many settings for outdoor recreation experiences. Rivers, lakes, and bayous are plentiful. Opportunities for hunting, fishing, and boating are certainly not limited to developed recreational sites. The state and the parish operate parks within easy driving distance of the Morgan City region. This abundance of natural recreational resources must be considered when evaluating recreational facilities within the Morgan City region. Nonetheless, developed recreation facilities are necessary for urban dwellers, and consequently, must be the concern of municipal governments.

TRANSPORTATION

The major public expenditure under the category of transportation is the construction and maintenance of streets. Money for state highways is provided through the state. No mass transit operates within the Morgan City region. Patterson does have a small airport to the west of the town. Local monies spent on transportation have gone almost exclusively toward

streets. Special assessment bonds for the purpose of paving streets have been issued frequently. An extensive program of street improvements has taken place in Morgan City over the last decade.

A major new addition to the transportation system in the region is the four-lane bridge across the Atchafalaya River and its continuing expressway through Morgan City. The bridge is now in use, but all of the expressway through the city has not been completed. The entire project is estimated to be in excess of $36,500,000. The old two-lane bridge made movement of traffic between Morgan City and the communities to the west of the Atchafalaya River difficult, particularly during rush-hour periods. The building of the new bridge has spurred development on the west side of the river. The expressway will divert much of the through traffic off the major surface streets in Morgan City and should measurably improve existing traffic congestion.

Morgan City.

Street paving bonds have been issued by the city many times in the recent past. Table 1 lists the paving bonds. The year of issuance and the dollar value is indicated. 1966 saw a massive program of street paving totaling over one million dollars. Map 1B illustrates the areal extent of

TABLE 1

PAVING BONDS, MORGAN CITY

Year	Amount of Bond (in dollars)
1938	35,000
1939	11,000
1940	20,000
1941	16,000
1956	52,695
1958	6,915
1958	101,490
1959	37,500
1961	125,700
1961	110,925
1961	182,400
1962	68,070
1963	27,600
1966	451,150
1966	304,950
1966	393,750
1969	16,280
1970	60,000
1972	260,466

the improvements made. Over the last twenty-five years extensive portions of Morgan City have had street work. The vast majority of the streets have been improved during the time period illustrated.

Additional benefits have been received from the Royalty Road Fund Revenues. This is a rebate by the state of severance tax funds to each parish, to be used for paving projects within that parish. From 1965 to 1975, the amount received by Morgan City was in excess of $2,000,000.

In Morgan City it is difficult to isolate the operating expenses for streets as totals are given for the Streets and Sewerage Department. Estimates are provided in Table 2 for selected years. Expenditures have risen sharply to a current level of over $200,000 per year. From 1961 to 1972 the salaries in the two branches were not separated, thus making a reasonable estimate difficult. It is clear, however, that the costs of maintaining streets have increased substantially.

The maintenance of streets requires a large investment in vehicular equipment. A summary of the value of the equipment purchased for the streets section of the department is indicated in Table 3. The major purchases included graders, bulldozers, trucks, and mowing machines.

TABLE 2

OPERATING EXPENSES, STREETS, MORGAN CITY

Year	Operating Expenses (estimates where necessary) (in dollars)
1953	54,000
1955	89,000
1957	87,000
1959	120,000
1961	96,000
1973	201,652
1974	212,186

Berwick and Patterson.

Both Berwick and Patterson have had street paving projects financed through the issuance of bonds. Table 4 lists the bond issues for Berwick and Table 5 lists those for Patterson. Tables 6 and 7 describe the operating expenses of the respective departments in Berwick and Patterson. In Berwick the amounts have been inconsistent over the last fifteen years. In Patterson the amount spent by the Streets and Landings Department has continually increased.

TABLE 3

EXPENDITURES ON EQUIPMENT, STREETS, MORGAN CITY

Year	Equipment Purchases (in dollars)
1951 - 1954	21,082
1955 - 1959	35,867
1960 - 1964	49,892
1965 - 1969	93,592
1970 - 1971	30,303

TABLE 4

BOND ISSUES, STREET PAVING, BERWICK

Year	Amount of Bond (in dollars)
1949	75,217
1956	29,470
1956	59,111
1965	97,633
1969	40,963

TABLE 5

BOND ISSUES, STREET PAVING, PATTERSON

Year	Amount of Bond (in dollars)
1966	352,552
1975	172,470

TABLE 6

EXPENSES, STREETS DEPARTMENT, BERWICK

Year	Expenditures (in dollars)
1950	11,012
1953	5,511
1956	11,112
1959	13,813
1962	18,634
1965	16,176
1968	3,256
1971	20,531
1974	21,245
1975	15,171

TABLE 7

EXPENSES, STREETS & LANDINGS, PATTERSON

Year	Expenditures (in dollars)
1959	24,824
1962	23,504
1965	37,406
1968	48,262
1974	60,868
1975	79,206

HOUSING

The nature of the housing stock is an important component in a community. The quality of housing bears directly upon the need for municipal action to upgrade areas. The quality of the structures in a region usually correlates well with other municipal services such as water, streets, and community facilities. Characteristics of the housing units are analyzed through a comparison of the four communities in the Morgan City region. The nature of housing in Morgan City and Berwick is then analyzed to note the changes which have taken place between 1950 and 1970. The concluding portion on housing tries to assess how land values within the region have changed.

Housing Characteristics.

The 1970 Census of Housing provides data for Bayou Vista, Berwick, Patterson, and Morgan City concerning housing characteristics. The first three smaller communities each have approximately the same number of housing units. Morgan City contains more housing units than all three combined, its total being nearly 5,000 housing units in 1970. Detailed characteristics of these housing units are summarized in Table 1. The bulk of the structures are single family dwellings. A few multiple family dwellings exist, these all being under twenty units per structure. Mention must be made of the large number of mobile homes found within the region. Nearly one-fourth of the units in Bayou Vista are of this type and over ten per cent of all dwellings units in these four communities are mobile homes. This illustrates the mobile nature of many of the residents and the relative scarcity of good housing. The majority of the housing units are owner occupied. The percentages range from a low of 58 per cent in Morgan City to a high of 77 per cent in Bayou Vista. The median value of homes varies considerably over the region. In Patterson the median value is only $13,400. A full 35 per cent are valued at under $10,000. In contrast, Bayou Vista has less than 3.0 per cent valued at under $10,000 and over 35 per cent is valued at above $20,000. Morgan City has the highest median value ($18,800), but also has the widest range in terms of home value distribution.

When scrutinizing the data on year built, several conclusions are clear. Bayou Vista has had the bulk of its construction (over 70 per cent) accomplished since 1960. Less than 4.0 per cent of the housing existed prior to 1950. In contrast, the other three communities each have a substantial older housing stock. Berwick had over 21 per cent of its existing housing stock built prior to 1940, Morgan City 23 per cent, and Patterson over 35 per cent. Each of these three communities has also had significant construction during the 1960's. Map 1C presents an areal impression of the expansion which has taken place in the Morgan City region. Compiled from a series of areal photographs, the map illustrates the location of major housing construction. During the early 1950's growth is seen in the north part of Morgan City. The 1960's see continued expansion in this direction as well as to the east. Bayou Vista has emerged during this time period. The latest period covered, to the middle 1970's, shows further growth around the periphery of all the communities. Morgan City has expanded even further to the east and Country Club Estates has grown in Berwick. Patterson has also grown to its west.

Plumbing facilities provide a good indication of the condition of a structure. The facilities are quite complete within the four communities viewed. Patterson ranked the lowest with over 13 per cent of the homes lacking either hot water, a toilet, or a bath. Almost all of the units were connected to the municipal water system and likewise sewer connections were high. A full one hundred per cent of the units were listed as connected with the municipal water systems in Bayou Vista and Berwick. Bayou Vista had the least complete sewer system with nearly 13 per cent of the units not connected. The presence of air conditioning somewhat reflects the decades of prime construction in each community. Bayou Vista, the newest

TABLE 1

HOUSING CHARACTERISTICS

	Bayou Vista		Berwick		Morgan City		Patterson	
Year-round housing units	1328		1306		4959		1209	
Units in structure								
one	965	72.7%	874	66.9%	3801	76.6%	964	79.7%
two	15	1.1%	62	4.7%	279	5.6%	82	6.8%
three-four	-	-	34	2.6%	201	4.1%	39	3.2%
five-nineteen	38	2.9%	144	11.0%	348	7.0%	46	3.8%
mobile homes	310	23.3%	192	14.7%	330	6.7%	78	6.5%
Period of construction								
1960-70	938	70.6%	371	28.4%	1820	36.7%	428	35.4%
1950-59	339	25.5%	429	32.8%	1153	23.3%	234	19.4%
1940-49	26	2.0%	227	17.4%	823	16.6%	118	9.8%
1939 or earlier	25	1.9%	279	21.4%	1163	23.5%	429	35.5%
Owner-renter								
Owner occupied	1013	77.2%	727	61.1%	2707	58.0%	686	60.6%
Renter occupied	299	22.8%	463	38.9%	1960	42.0%	446	39.4%
Year moved in - Owner occ.								
1960-70	813	82.4%	391	53.8%	1618	60.1%	388	56.6%
1950-59	174	17.6%	174	23.9%	433	16.1%	165	24.1%
1949 and earlier	-	-	162	22.3%	643	23.9%	133	19.4%
Year moved in - Renter occ.								
1960-70	307	100%	437	94.4%	1777	90.4%	399	89.5%
1950-59	-		19	4.1%	99	5.0%	40	9.0%
1949 and earlier	-		7	1.5%	90	4.6%	7	1.6%
Value - Owner occ.								
$35,000 and over	17	2.3%	26	4.8%	281	12.3%	25	4.3%

(TABLE 1, continued)

	Bayou Vista		Berwick		Morgan City		Patterson	
Value - Owner occ.								
$25-34,999	62	8.5%	39	7.2%	458	20.0%	40	6.9%
$20-24,999	203	27.8%	68	12.5%	318	13.9%	72	12.4%
$15-19,999	276	37.8%	165	30.4%	372	16.3%	118	20.3%
$10-14,999	152	20.8%	122	22.5%	448	19.6%	121	20.9%
Under $10,000	20	2.7%	122	22.5%	409	17.9%	205	35.3%
Median value	$18,500		$15,800		$18,800		$13,400	
Contract Rent (monthly)								
$150 and over	22	7.4%	4	.9%	102	5.2%	4	.9%
$100-149	116	38.9%	51	11.9%	275	14.1%	29	6.5%
$80-99	79	26.5%	57	13.3%	235	12.0%	66	14.8%
$60-79	50	16.8%	148	34.6%	495	25.3%	105	23.6%
$40-59	13	4.4%	89	20.3%	375	19.2%	114	25.6%
Under $40	5	1.7%	81	18.9%	346	17.7%	76	17.1%
No cash rent	13	4.4%	??		129	6.6%	51	11.5%
Vacant units	24	1.8%	116	8.9%	307	6.2%	77	6.4%
Plumbing								
Complete facilities	1322	99.0%	1254	96.0%	4675	94.0%	1046	86.5%
Lacks hot water, toilet, or bath	14	1.0%	52	4.0%	299	6.0%	163	13.5%
Water								
Municipal system	1323	100%	1306	100%	4934	99.2%	1203	99.5%
Well or other	-	-	-	-	39	.8%	6	.5%
Sewer								
Sewer connected	1154	87.2%	1277	97.8%	4869	97.9%	1142	94.5%
Cesspool, septic tank	169	12.8%	29	2.2%	104	2.1%	67	5.5%

(TABLE 1, continued)

	Bayou Vista		Berwick		Morgan City		Patterson	
Air Conditioning								
Central air	402	30.4%	157	12.0%	1266	25.5%	245	20.3%
Window unit(s)	764	57.8%	654	50.1%	1944	39.1%	422	34.9%
None	157	11.9%	495	37.9%	1763	35.5%	542	44.8%

community, has the largest percentage with central air conditioning (30 per cent) and the largest percentage with either central or window units (80 per cent). Patterson has the largest per cent of older buildings and the highest percentage of units with no air conditioning (44 per cent). Morgan City and Berwick fall in between, with Morgan City having a greater percentage with central air, perhaps reflective of its more recent construction and higher median value of homes.

Approximately 6.0 to 9.0 per cent of the units remained vacant at the time of the 1970 census, except in Bayou Vista where that figure was below 2.0 per cent.

Comparisons can be made between housing characteristics in 1950 and in 1970 for both Berwick and Morgan City. Data does not exist to allow comparisons for Bayou Vista and Patterson. Bayou Vista did not exist as a community in 1950 and Patterson lacked the requisite population to be enumerated in detail. Table 2 vividly illustrates some of the significant changes which have occurred to the nature of the housing stock in Morgan City and Berwick from 1950 to 1970.

Both Morgan City and Berwick expanded their number of housing units between 1950 and 1970 by more than 80 per cent. In each community the per cent of single family dwellings decreased, the per cent of multiple family dwellings increased. The number and per cent of mobile homes increased most dramatically. The relationship between owner and renter units did not change substantially. The per cent of owner occupied units increased slightly in Morgan City and decreased slightly in Berwick. The value of housing increased nearly fourfold in Berwick and nearly fivefold in Morgan City. Inflation is, of course, a major cause for this increase, but improvements in the housing units themselves seems also to be significant. In 1950, only a little more than 40 per cent of the housing units had hot and cold running water inside. By 1970 this figure was over 95 per cent in both communities. The upgrading of older housing and the building of new structures have combined with inflation to see over half of the owner occupied housing worth over $15,000 in 1970. This compares with 2.9 per cent for Berwick and 7.3 per cent for Morgan City in 1950. In 1950 over half of the housing stock was worth less than $5,000. This figure was less than 10 per cent by 1970. Similar trends are apparent when contract rent is viewed. The quality of the housing units has improved dramatically from 1950 to 1970 in both Morgan City and Berwick.

Land Values.

Land values have risen dramatically in the Morgan City area over the last decade. Inflation is augmented by a scarcity of usable land within the region. To gain a better understanding of how prices have changed, a series of interviews were conducted with reputable realtors in the Morgan City area. The remarks of the realtors are summarized below. The view of each realtor is identified by number (1, 2, 3, or 4). Comments were made about both residential and commercial properties. Each interviewee indicated

TABLE 2

HOUSING CHARACTERISTICS, 1950 and 1970

	1950 Berwick		1970 Berwick		1950 Morgan City		1970 Morgan City	
Year-round housing units	751		1306		2736		4959	
Units in structure								
one	628	83.6%	874	66.9%	2275	83.2%	3801	76.6%
two	90	12.0%	62	4.7%	330	12.1%	279	5.6%
three-four	22	2.9%	34	2.6%	73	2.7%	201	4.1%
five or more	-	-	144	11.0%	12	.4%	348	7.0%
mobile homes	11	1.5%	192	14.7%	46	1.7%	330	6.7%
Year Built								
1960-1970			371	28.4%			1820	36.7%
1950-1959			429	32.8%			1153	23.3%
1940-1949	300	39.0%	227	17.4%	1175	43.4%	823	16.6%
1930-1939	65	8.4%			365	13.5%		
1920-1929	40	5.2%	279	21.4%	355	13.1%	1163	23.5%
1919 or earlier	365	47.4%			810	29.9%		
Owner - renter								
Owner occupied	463	66.0%	727	61.1%	1431	55.3%	2707	58.0%
Renter occupied	239	34.0%	463	38.9%	1155	44.7%	1960	42.0%
Value - Owner occ.								
$15,000 or more	11	2.9%	298	55.0%	85	7.3%	1429	62.5%
$10-14,999	18	4.7%	122	22.5%	106	9.1%	448	19.6%
$5-9,999	140	36.4%	122	22.5%	287	24.7%	409	17.9%
Under $5,000	216	56.1%			687	59.1%		
Median Value	$4,538		$15,800		$4,000		$18,800	
Contract Rent (monthly)								
$100 or more	-	-			1	.1%	377	19.3%

(TABLE 2, continued)

	1950 Berwick		1970 Berwick		1950 Morgan City		1970 Morgan City	
Contract Rent (monthly)								
$40-99	43	18.0%			329	27.5%	1105	56.5%
Under $40	148	61.9%			704	58.8%	346	17.7%
None or not reported	49	20.5%			163	13.6%	129	6.6%
Median rent	$22.25		$68		$27.56		$67	
Vacant units	48	6.4%	116	8.9%	141	5.2%	307	6.2%
Water supply								
Hot and cold inside	318	42.5%	1269	97.2%	1110	40.8%	4737	95.2%
Cold only	248	33.1%	33	2.5%	1045	38.4%	207	4.2%
No piped water inside	183	24.4%	4	.3%	568	20.9%	30	.6%

that prices have risen substantially over the last twenty-five years, the most rapid rise occurring during the last decade.

Interview summaries:

Residential Property -

(1) Elliot subdivision (Morgan City). From 1952 to 1972 the cost of lots increased from $40.00 per front foot to $200.00 per front foot.

(3) Elliot subdivision. In 1958 a 60' x 120' lot sold for $3,500. Today these lots are priced between $14,000 and $18,000.

(2) Through the 1950's and the 1960's land in Morgan City sold for between $35.00 and $40.00 per front foot. The average lot sold for around $2,500.

(3) A typical 60' x 100' lot in Morgan City now sells for as high as $12,000.

(4) A piece of property in the Lakeside subdivision (Morgan City) made a profit of $13,000 within just three years. It is common for profits of $4,000 per year.

(3) In Lakeside subdivision the older lots are selling for $145 per front foot, while those near the lake are selling for between $160 and $180 per front foot.

(1) In Morgan City, from 1952 to 1963 the price of a lot ranged from $600 to $1500. By 1976, an equivalent lot was priced at $7,500 to $8,000. The greatest increases have occurred during the most recent decade.

(1) In Bayou Vista in 1950 a 75' x 150' lot sold for about $600. It now sells for about $8,000.

(2) In Bayou Vista an average lot which sold for $800 in the 1960's now sells for $7,500.

(3) In Bayou Vista land increased enormously in 1975 due to the construction of the new bridge. It is estimated that land increased 30 to 40 per cent in a very short time. A 75' x 150' lot on a paved street typically goes for $10,500.

(4) The advent of the bridge increased prices 30 per cent in Bayou Vista.

Commercial Property -

(1) In 1966 the rate in Morgan City for commercial property was about $2,500 per acre. In 1975 some commercial properties were selling at $12,000 per acre.

(2) It is estimated that the value of commercial property has tripled in the last fifteen years.

(4) Four years ago commercial property could be found selling for as low as $200 per front foot. A price of $450 per front foot is common now.

Waterfront Property -

(1) A typical piece of land 150' x 400' has jumped from $2,000 in the 1950's to upwards of $30,000 at present.

(4) In the Amelia area property is so scarce that virtually none is being sold. Most of the land is in long term lease.

To further document how prices have increased within the region the last twenty-five years information was gathered from the St. Mary Parish Clerk of Court's Office. Examples illustrate how lot and house values have changed. Table 3 provides a list of those examples. Though the time intervals between sales differs, a general trend is evident. Recent transactions in Patterson and Bayou Vista indicate the effect of impending bridge construction in raising land values.

TABLE 3

CHANGE IN PURCHASE PRICE, SELECTED LOTS

Description	Date of Sale	Price
Morgan City:		
Elliot Subdivision 75' x 124'	1/25/65 lot only	$ 4,500
	3/19/71	28,800
	5/28/74	32,500
Elliot Subdivision 62' x 120'	8/30/63	21,700
	6/17/65	23,400
	8/19/69	27,300
	4/11/74	34,500
Elliot Subdivision	4/24/62	24,000
	4/17/69	26,000
	4/15/72	31,500
	11/29/73	33,900
Auburn Subdivision	8/23/67	19,200
	9/17/69	22,000
Lakeside Subdivision 65' x 100'	3/10/67	27,400
	11/4/68	28,669
	3/17/75	31,900
	11/18/75	43,000

(TABLE 3, continued)

Description	Date of Sale		Price
Lakeside Subdivision	9/3/68		24,700
60' x 100'	7/28/70		26,600
	9/27/70		27,400
	9/19/74		32,100
Lakeside Subdivision	10/28/65		31,870
70' x 110'	11/3/67		40,000
	10/23/73		48,500
O'Brian Subdivision	7/26/56		10,000
50' x 86'	12/6/68		13,000
Older area	5/31/71		14,000
	4/24/74		16,500
McArthur Subdivision	1/18/49	lot only	750
50' x 100'	3/3/56		6,000
Older area	11/4/68		13,000
Aucoin Subdivision	9/3/63	lot only	3,000
76' x 90'	3/19/65	lot only	4,000
Older area	4/12/65		16,500
Bayou Vista:			
Bayou Vista Park Subdivision	8/29/66		18,000
65' x 125'	3/19/69		19,972
	9/28/72		22,500
Bayou Vista Subdivision	7/28/59	lot only	1,200
70' x 142'	1/8/65		10,200
	11/24/70		11,000
	12/19/75		22,500
Patterson:			
River Oaks Drive	10/19/55	lot only	3,500
100' x 100'	6/26/58	lot only	4,144
	7/20/71		12,000
	1/9/72		14,000
	1/20/74		25,500
Waveland Addition	10/13/65		12,000
70' x 100'	7/30/67		19,900

St. Mary Parish Assessments.

Assessments for St. Mary Parish have increased every year from 1954 through 1973. The assessed value of property in the parish in 1973 was more than four times the value in 1954.

The greatest annual increases occurred in the years 1955-1958 and again in 1966. While continuing to increase, the growth slowed noticeably in 1972 and 1973 when the percentage increases were 2 per cent and 1 per cent respectively.

Year	Total Assessments	% Increase Over Previous Year
1954	$ 37,335,972	
1955	42,025,730	13%
1956	46,755,740	11%
1957	53,024,970	13%
1958	60,397,650	14%
1959	62,850,560	4%
1960	66,014,190	5%
1961	69,959,800	6%
1962	76,100,370	9%
1963	80,218,450	5%
1964	87,228,450	9%
1965	94,279,210	8%
1966	102,727,040	11%
1967	110,999,755	8%
1968	117,637,920	6%
1969	127,748,120	9%
1970	138,705,690	9%
1971	150,747,955	9%
1972	154,278,135	2%
1973	155,841,890	1%

Morgan City Revenues.

With the exception of 1961, Morgan City revenues have increased every year from 1950 through 1974. Total revenues for the city in 1974 ($2,633,598) were better than fifteen times the income of 1950.

Expenditures have increased with income every year except 1961. The city registered a budget surplus during twenty-one of these twenty-five years, but two of the deficit years were the most recent. In both 1973 and 1974 Morgan City incurred deficits of around $100,000.

Year	Revenues	% Increase Over Previous Year	Expenditures	Difference
1950	172,377.45		154,986.05	17,391.40
1951	248,875.01	44%	219,190.67	29,684.34
1952	269,514.21	8%	224,910.46	44,603.75
1953	324,194.01	20%	276,311.17	47,882.84
1954	341,028.53	5%	305,791.76	35,236.77
1955	400,948.74	18%	356,670.01	44,278.73
1956	414,254.92	3%	383,065.26	31,189.66
1957	471,849.96	14%	434,284.30	37,565.66
1958	483,162.60	2%	476,086.94	7,075.66
1959	588,691.89	22%	546,449.71	42,242.18
1960	652,185.38	11%	620,140.80	32,044.58
1961	584,873.57	-10%	588,958.40	-4,084.83
1962	653,496.57	12%	649,827.69	3,668.88
1963	713,766.97	9%	710,498.59	3,268.38
1964	733,432.82	3%	748,390.18	-14,957.36
1965	820,099.73	12%	815,699.46	4,400.27
1966	1,011,970.98	23%	996,891.32	15,079.66
1967	1,157,691.09	14%	1,148,492.80	9,198.29
1968	1,330,293.62	15%	1,281,956.72	48,336.90
1969	1,480,763.55	11%	1,400,175.43	80,588.12
1970	1,601,831.87	8%	1,566,662.72	35,169.15
1971	1,900,835.28	19%	1,839,380.45	61,454.83
1972	2,065,849	9%	1,855,154	210,695
1973	2,202,165	7%	2,298,154	-95,989
1974	2,633,598	20%	2,735,711	-102,113

Summary.

The preceding data illustrate the extensive growth experienced in the study area. In order to provide an adequate level of municipal services, expenditures have risen dramatically. New departments have been created, new positions staffed, and new procedures developed to meet the needs of a much larger population concentration.

Expenditures by various municipal departments in Morgan City, Berwick, and Patterson have increased tremendously. In many instances expenditures were near zero before 1950. In Morgan City, most departments now have budgets in the hundreds of thousands of dollars. Bond issues have been passed to meet the need for new facilities. Where these were frequently in the tens of thousands of dollars in the 1940's, they now measure in the millions of dollars.

The municipalities in the region have had to respond to rapid growth. They must plan for new facilities which are already needed. Funds are not available to anticipate growth. OCS activities have special needs and these needs must be met. Local support of the oil and gas industry is very strong with the belief that, in spite of costs associated with rapid growth, the industry provides innumerable net benefits to the region. Unfortunately these net benefits do not always find their way into municipal coffers to financially support necessary services.

Sources:

All budgetary and bond issue information was gleaned from the annual audit reports (both general fund and utility) for Morgan City, Berwick, and Patterson. Housing data was extracted from the United States Bureau of the Census, from aerial photographs of the region, and from interviews with realtors in the study area. Background data was garnered from visits to the region and from personal interviews with municipal officials.

TRANSPORTATION

Robert Franz, Author

Charles Durio, Research Assistant

INTRODUCTION

The American transportation system is so all-pervasive and so efficient that few think about it unless inconvenienced by a breakdown of some of its parts. Indeed, transportation is taken for granted. Yet, every product we consume has been transported, often several times by various means, before it gets to us. Our daily travel to and from work, shopping centers, the world of entertainment, or university classrooms involve transportation. Even the services we consume would be literally impossible without the transportation of tools, repair parts, or other means of producing services.

Even our culture and heritage are strongly influenced by the availability of the various modes of transportation. It played a pivotal role in the discovery, settlement (or lack of), and development of our nation. The isolation of various parts of the country is due, in part, to the lack of adequate means of transportation. Some understanding of this system then--its general significance and specific uses, its internal workings and its external relationships, its origins and its future paths, its problems and its accomplishments--is a necessary part of the education of those desiring to play a significant role in the economic, business, or political life of our country.

The general scope of transportation, from the standpoint of economic significance, would encompass five separate but interconnected roles. These are: 1) transportation and economic development, 2) transportation and production, 3) transportation and distribution, 4) transportation and prices, and 5) transportation and economy. Basically, transportation is involved with two elements: 1) changing the place or the location of an item (place utility), and 2) the subsequent time involved (time utility).

The purpose of this portion of the study is to describe the major existing transportation systems in and around Morgan City, Louisiana. While it is recognized that a transportation system does not begin and end in one parish, a city that is central to offshore oil and gas exploration and a recipient of its subsequent economic impact would not reap maximum benefits without a well integrated transportation system. One can begin with the city and parish, but it must eventually be coordinated at all levels, intrastate and interstate.

Highways

Morgan City is located on U.S. Highway 90 on an east-west route from New Orleans to Houston, Texas. Approximately thirty miles of this route through St. Mary Parish is a hard-surfaced concrete two-lane highway. A strip about ten miles long between Calumet and Berwick is a concrete and asphalt surfaced four-lane highway which forms a bypass around the towns of Patterson and Bayou Vista. Access to these towns is via State Highway 182, a two-lane paved roadway. The only immediate northerly route toward Baton Rouge is by way of State Highway 70 which merges with Louisiana

Highway 1 some 33 miles north of Morgan City. In order to travel the central part of the state, one must use north bound U.S. Highway 167 in Lafayette, some 71 miles northwest of Morgan City.

At present, according to the Parish Engineers' Office, St. Mary Parish has 79 miles of asphalt-surfaced roads, 30 miles of concrete-surfaced highways, and 42 miles of shell roadways. This does not take into consideration a number of dirt roads considered insignificant for this study.

A study will soon be initiated to determine the effect oil industry activities have had on the roads in the parish. This study and sign inventory will be an attempt to rate the roads according to National Safety Standards. It also has as an objective an analysis of the structural value of the roads and the current state of repair. All throughways will be judged according to prescribed parameters for concrete, shell, and asphalt roads and is expected to be completed by June 1977. Except for major routes such as U.S. 90 and Louisiana 70 the impact of OCS activities should be small. It must be remembered that the study area includes and is surrounded by numerous oil and gas fields. Aside from the major routes, onshore activities will have the major impacts.

Information was obtained from the district 03 engineers' office, Louisiana Department of Highways, regarding the current status of roads and highways in St. Mary Parish, the type of improvement needed, the time period required for this improvement, and the total construction cost, as well as other information (see Appendix A).

Of the approximately 109 hardtopped roads and highways, about 81 miles need some type of repair. New construction on a four-lane route needs to be completed. A summary of the parish needs is shown below in terms of miles, the improvement needed, and the estimated total construction costs.

HIGHWAY NEEDS SUMMARY FOR ST. MARY PARISH - 1976

Control Section	Miles	Improvement	Total Construction Costs (000)
4-06 & 4-07	2.63	Resurface	$ 405
	9.66	Resurface	1,731
	.44	Resurface	107
	.39	Resurface	71
	.76	Resurface	216
	.24	Resurface	45
	10.44	Resurface	2,034
SUB-TOTAL	24.56		$4,609

Control Section	Miles	Improvement	Total Construction Costs (000)
4-08	.12	Resurface	$ 9
	.23	Resurface	29
	1.00	Resurface & Sho.	171
	.80	Reconstruct	326
	5.28	Resurface	904
	.14	Resurface	22
SUB-TOTAL	7.62		$1,461
5-01	.10	Resurface	47
	.20	Resurface	70
	.12	Resurface	28
	1.43	Resurface	489
	1.30	Resurface	443
	4.23	Resurface	986
SUB-TOTAL	7.38		$2,063
230-05 & 230-06	5.44	Reconstruct	1,556
	.76	Resurface	139
	1.05	Resurface	185
	.35	Resurface	91
SUB-TOTAL	7.60		$1,971
239-01 & 239-02	8.09	Resurface	428
	.52	Reconstruct	199
SUB-TOTAL	8.61		$627
239-31	3.79	Resurface	301
	.95	Resurface	75
SUB-TOTAL	4.74		$376
243-01 & 243-02	10.42	Resurface & Sho.	826
	9.30	Resurface	421
	.55	Resurface	48
	.54	Structure only	82
SUB-TOTAL	20.81		$1,377
TOTAL	81.32		$12,484

The most critical needs in the above table reflect the urgency to complete four-laning of U.S. 90. As is pointed out in other parts of this study, many commuters drive to the Morgan City area either on a daily or other basis. On the two-lane sections, numerous traffic jams and slowed rates of progress are evident. The problem is especially bad on the section leading west toward Lafayette during cane grinding season. At this time numerous farm tractors pulling trailers and slow cane trucks litter the roadway with

stalk, mud, and dirt from the fields. The accident rate is so bad that this portion of U.S. 90 is sometimes referred to as "blood alley." The completion this year (1977) of a new four-lane bridge between Berwick and Morgan City has removed one of the most serious bottle necks.

Truck Transportation.

With Morgan City situated directly on U.S. 90, one of the main east-west routes from Houston, Texas, to New Orleans, Louisiana, freight shipments have little difficulty of movement. There are some problems, however. There are numerous small towns through which vehicles must pass. There are few by-passes and much of the highway is two-lane, causing concentrated traffic behind slower-moving large trucks.

Morgan City is nevertheless served by numerous freight lines which include "hotshot" oilfield services, heavy hauling, liquid bulk transport services and commodity movers. There are companies represented in both intrastate and interstate hauling. Approximately fifteen companies concern themselves with heavy oilfield hauling with the following breakdown:

Type of Service	Number of Companies
"Hotshot" heavy oilfield hauling	5
Truck lines accommodating heaving oilfield equipment	9
Transportation of liquids, drilling muds and slurry only	1
TOTAL	15

In addition to the above, two lines concern themselves with freight of all types. They do move oilfield equipment but do not confine themselves to this type of hauling.

Five of the above firms maintain offices in Lafayette, Louisiana, the closest metropolitan area to Morgan City. Regular runs as well as trips on demand from Lafayette to Morgan City are made daily with return runs back-hauling freight to Lafayette being common. Information on these companies will be found on the following page.

Two typical motor freight companies serving Morgan City are SAIA Motor Freight of Louisiana and Texas, and Southern Pacific Transport of the same. Both are interstate carriers, and both operate on regular schedules between Lafayette and Morgan City on the west, and New Orleans and Morgan City on the east. Both carriers will handle shipments of mixed freight.

Figures obtained from SAIA show an average of 75-80 thousand pounds moved daily for LTL shipments (less than truckloads). Truckload shipments average out to an additional 100,000 pounds. The above figures are for inbound shipments only. Outbound shipments are substantially lower, averaging about 2,500 lbs. daily. Shipments of carbon black from area plants go out two or three times weekly and each load is 40,000 lbs.

A summary of statistics from Southern Pacific shows that inbound freight from Lafayette approximates 175,000 pounds weekly. Another 125,000 pounds comes from New Orleans. Other incoming runs not included above consist of shipments arriving in Morgan City from a Beaumont-Lafayette run that averages about 120,000 pounds per week. The latter are Solid Truckload Movements (one type of cargo only--full load) and consist of great quantities of lube oil for offshore use.

Outbound freight from Morgan City to Lafayette averages 28,000 pounds weekly for ordinary freight. Other shipments made from Morgan City consist of sugar. These sugar shipments originate at the refineries of Mathews, Supreme, and Southdown, and average about 360,000 pounds per week on a year-round basis.

SAIA estimated that 80% of all their shipments arriving in Morgan City were oilfield related. Southern Pacific put their figure at 60%.

Rail Transportation.

There is only one railroad line serving Morgan City and the immediate vicinity. The Southern Pacific Rail Lines operate a number of regularly scheduled freight runs through the Morgan City, Avondale, and the Patterson-Berwick area. Though Amtrak does go through, it does so without making a stop and boarding has to be made at either Schriever (30 miles east at the junction of State Highways 20 and 24), or at New Iberia (46 miles west on U.S. 90/State Highway 182).

The operating schedule for freight precludes any actual stops in Morgan City by "Main Line Runs". These main runs include three daily westbound freight movements originating in the Avondale yards to Houston, Texas, and three eastbound daily runs that make up in Houston and proceed to Avondale. On occasion, a shipment will be of such a nature that the usual freight handling procedures will be abandoned and the eastbound run will stop in Morgan City to deposit the shipment there. The normal method of freighting cargo there, however, consists of having eastbound runs from Houston offload the freight in Lafayette where it is handled by "locals" switching out of there. Each day a local leaves Morgan City heading west to Lafayette and another heads east to Avondale. Two similar runs leave both Lafayette and Avondale bound for Morgan City daily.

Service to the outlying areas of Patterson, Berwick, and Bayou Vista is accomplished by locals on spur lines out of Morgan City. There is a spur or "team" track off of the main line at Patterson where several companies make use of the siding for receipt of cars of drilling mud, pipe, building materials and the like. This siding receives an average of about two cars per week. Deliveries of freight to Bayou Vista are also made through this siding. There is also a spur to Baldwin and the schedule for deliveries there is set up for one late afternoon run per day, an overnight offloading and loading operation (serving mostly the salt mine at Weeks Island and the carbon black plant at Ivanhoe), and a return to Morgan City the following morning. A carbon black plant at North Bend in the Bayou Sale area is also served by this run.

LAFAYETTE BASED FREIGHT COMPANIES

Freight Company	Scheduled Runs	Trips Per Week	Type of Freight
Acme Freight Lines	None (Runs made on demand)	Approximately 30	Oilfield equipment only
Service Truck Lines	None (Runs made on demand)	6 to 7	Oilfield equipment only
SAIA Motor Freight	Yes	5 per week from Lafayette 6 per week from New Orleans	Everything from household goods to heavy equipment
Southern Pacific Lines	Yes	2 per day from Lafayette 2 returns backhauling	All types of mixed freight, merchandise, food, clothing, etc. (Will handle heavy equipment if necessary).
Rose Truck Lines	Yes	One run per day - Tuesday Three Saturday. Backhauling daily. Same schedule is followed by the Harvey, Louisiana office.	Oilfield equipment only

The total number of trains going through Morgan City daily has diminished, but this is not indicative of any slowdown in ton/miles of freight moved. The tonnage, in fact, has seen a steady increase in recent years due to the more modern rail equipment used. In the past the average train consisted of railcars 45 feet in length and 40-50 cars per train. Today's runs are made up of two to four engines pulling up to 250 cars each 90 feet in length.

Some representative statistics for an average month in 1975 show 362 cars of 90,000 pound capacity each arriving in Morgan City. These shipments, consisting principally of drilling mud, oilfield equipment and pipe, were 70-75% oil-industry related. Departing from Morgan City were 174 cars of 120,000 pounds each whose shipments consisted mostly of line, pipe, and fishmeal. It was estimated that approximately a 20% increase has taken place in total tonnage of shipments over the past 10 years.

Bus Transportation.

There is only one bus service operating out of Morgan City and serving the area. Greyhound Lines maintains an eastbound schedule of five busses daily and a westbound schedule of six busses daily as follows:

Number of Busses Daily	Destination
3	Houma, New Orleans, and Mobile
1	Houma, Thibodaux, and New Orleans
1	Thibodaux, and New Orleans
6	Lafayette, Lake Charles, Houston

Two eastbound runs stop at Amelia for station stops. Several of the westbound runs make station stops at Patterson, Franklin, Baldwin, Jeanerette, and New Iberia before reaching Lafayette. Travelers heading north must change busses in Lafayette.

Pipelines.

Though the system of pipelines is designed to transport only oil and gas, Louisiana has a system which is second only to the thoroughfare system in total mileage. The oil companies have an extensive network of oil and gas pipelines in St. Mary Parish. Because of the inadequacy of the information available, it was impossible to obtain data pertaining to the actual number of pipeline miles and the exact amount of oil and gas transmitted through these lines. These lines serve both intrastate and interstate needs. For a more complete description of pipeline activities, see the section on "Land".

Offshore activity is expected to remain strong for the immediate future. This means, of course, a fairly stable employment picture. At present, natural gas is the nation's second most widely used fuel, after oil, accounting for 30 per cent of total U.S. energy needs. Most of this gas is drawn from deep deposits in Texas, Louisiana, Alaska, Oklahoma and about a dozen other states and is distributed to customers across the nation through a vast

network of underground pipelines that total approximately 650,000 miles long and are operated by almost 150 major transmission companies. For the U.S., the most promising areas of exploration are for offshore, in deep, hard-to-drill waters. It is estimated that fully one-third of the world's undiscovered oil is locked beneath the sea bed.

Water Transportation.

The Gulf Intracoastal Waterway has often been referred to as the most remarkable artery of transportation in America. Conceived in 1905 to link inland ports with ocean-going traffic, this avenue of commerce has far outgrown even the wildest expectations of its founders.

This system of canals connecting major shipping ports was initially constructed with depths of five feet and bottom widths of 40 feet. The canals proved so successful, improved the life of the Gulf coastal area, and profited the nation to such a degree that over the years Congress authorized the U.S. Army Corps of Engineers to enlarge the project depths and widths to more than twice the original dimensions. In addition, the canals were connected to one major waterway.

Today the system stretches from the Mexican border at Brownsville, Texas, along the entire coast of the Gulf of Mexico to St. Marks, Florida, providing over 1,300 miles of protected waterway, most of it 12 feet deep and 125 feet wide.

St. Mary Parish is in an enviable position as far as present available water transportation and future transportation is concerned. In addition to such large navigable bodies of water as the Gulf Intracoastal Waterway in the southern part of the parish, the Atchafalaya River and Bayou Teche, there are many more canals and smaller streams that contribute to water accessibility within the parish. Two main drainage and navigation canals starting at the Teche and emptying into the Atchafalaya Bay are the Charenton Canal and Wax Lake Outlet Canal. The Bayou Teche flows west to east and empties into the Atchafalaya at Patterson.

Because of Morgan City's location at the junction of the Intracoastal Waterway, which runs from Texas to Florida, and the Atchafalaya River, which joins the Mississippi, the port of Morgan City is in a position to serve the markets of almost the entire half of the U.S. (See Appendix D).

Since Morgan City is situated in the center of the Louisiana Gulf Coast, along with the network of canals and rivers which spread out from it in all directions, it becomes a natural and desirable port for a large portion of Louisiana. Because of this good location, and the fact that Morgan City has the only good natural harbor along the coast, it has become one of the most active offshore centers for oil company operations on the Gulf.

Very little, if any, gas and oil is stored and/or used in Morgan City from the extensive offshore network of wells. Most of the oil is taken directly to other ports adjacent to refineries with Morgan City benefiting

primarily from the hauling of oilfield supplies, men, and equipment from shore to OCS areas. Residual fuel oil is stored and used mostly by the oilfield service companies. Movements of petroleum and petroleum products in the Atchafalaya-Morgan City area are generally transient in nature and usually originate from inshore and onshore fields.

The most recent summary of vessel movement for the Atchafalaya Bay seen by the author was for July 1974 and therefore was not included. These figures are obtainable from the Morgan City Harbor and Terminal District and give a breakdown for crewboats, tug/tow operations, supply vessels and "other".

Air Transportation.

Planning for an adequate aviation system first began in the latter part of 1972 under the direction of Governor Edwin Edwards. A revamping of the Division of Aviation occurred with the intent of obtaining a maximum of local participation in its development.

According to an Airport Systems Plan survey conducted in late 1973, the aviation facilities within St. Mary Parish need improvement. Out of ten airports in the Acadiana Planning and Development District, the one in Patterson showed a need for improvement in nine areas. These were in: obstruction removal, pave, MIRL, VASI, REIL, acquisition, improve access, lighted wind cone, and meterological instruments.

The only air facility serving St. Mary Parish is the Harry P. Williams Memorial Airport located approximately two miles northwest of Patterson, Louisiana, situated on the high natural levee of Bayou Teche. It is classified as a Basic Transport (BT) airport by the National Airport System. This airport serves the air transportation needs of the Morgan City-Berwick-Patterson areas, providing essential passenger and goods transport services to both commercial and industrial interests in the area. This is an especially important aspect to both the onshore and offshore oil and gas operations near and in the Gulf of Mexico.

A forecast of aviation demand from 1972 to 1993 was made for the Louisiana State Aviation System by the Northrop Airport Development Corporation in 1976. The figures are indicated below.

CURRENT AND PROJECTED GENERAL AVIATION ACTIVITY FOR HARRY P. WILLIAMS AIRPORT

	1972 Operations	1993 Operations
Land Planes	37,700	89,000
Sea Planes	17,000	31,600
Helicopters	12,000	67,000
TOTAL	61,700	187,600

The total number of land planes based at the above airport is projected to increase by more than 130 per cent by the projected date. Sea planes are expected to increase by 150 per cent and helicopters by 460 per cent during the same period. The implications of this study are defined in much needed expanded facility requirements. It should be kept in mind that these projections are dependent upon a continued high level of OCS activities. In addition to the air support operations to the offshore industry provided by the Williams Airport, Petroleum Helicopters, Inc. (PHI), maintains a large and complete base in Amelia for the prime purpose of providing ferry service to and from the many offshore oil platforms that dot the Gulf of Mexico off the Louisiana coast. This company, one of the largest operations of its kind, keeps 60 of its fleet of 450 available for the activity in and around Morgan City. These helicopters make an average of some 200 flights daily providing passenger service to the rigs as well as the occasional transportation of small equipment and tools.

As of early 1976, one commercial carrier operates a regular daily schedule of flights into and out of the Harry P. Williams Airport. Coastal Airways, with its eight-passenger capacity Cessna 402, has two flights in and out daily, six days a week. These flights originate at Gulfport, go to New Orleans, Patterson, and return to New Orleans. This line has a current average of approximately 24 passengers per month. To make the service a permanent one, a monthly goal of 90-120 must be attained.

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CONCLUSIONS

Potential impacts of OCS activities upon a community can be listed under a number of categories. In many cases these categories are directly related to one another; however, delineating the impact along a number of variables does allow one to more clearly conceptualize the extent and direction of the impact.

I. Employment

One of the more visible effects of increased OCS activities is the concurrent increase in employment in the immediate area. Not only does employment increase directly as new activities are undertaken, but employment also increases as secondary and tertiary industry gear up to meet the increased demand for goods and services.

II. Income

Closely tied to increased employment are increases in personal income for those employed. These changes occur as increased specialization is required from employees, and as the developing areas of the economy must compete for existing labor.

III. Occupational Shifts

Tied to increases in both income and employment is the necessity for many employees to change their occupations in order to take advantage of the new opportunities. Many of these changes in occupation require changes in working hours, skills required, and life styles in general.

IV. Population Increases

In-migration to an area with increasing employment opportunity can become one of the potentially more problematic impacts of OCS activities. With rapid population increases, strains are placed on available housing, community services, and a variety of interrelated services such as utilities, sewage disposal, etc.

V. Increased Division of Labor

As the economy diversifies, new jobs are created, the population increases, and shifts in occupation occur. This will mean that a greater variety of jobs will exist in the occupational structure. The type of job that one works at for eight (or twelve in some cases) hours a day affects both directly and indirectly one's life style, status in the community, orientation toward community activities, and outlook on life in general. With this increase in job categories and concurrent diversity in life styles, etc., the sense of community found in most smaller homogeneous settlements is lost.

VI. Changes in Land Use

With the increase in employment and population, the demand arises for land to be used as industrial sites and housing development. Lands formerly used for other purposes (principally agriculture) are thus switched to more profitable uses. In some cases these changes require alteration of the land through such activities as dredging or filling.

VII. Strains on Municipal Services

Municipal services are potentially impacted both directly (as OCS related activities increase their consumption of water electricity, etc.) and indirectly (as population growth places new demands on these services).

VIII. Destruction of the Environment

Closely related to changes in the use of land and the strains placed on municipal services are activities which are potentially destructive to the environment. The activities range from the necessity to dump raw sewage into local streams to dredge and fill activities to provide industrial sites and housing developments. In addition, there are other activities directly related to OCS production and exploration which pose potential problems. These range from oil spills (both at the site of production and exploration and as boats and barges are loaded and unloaded at central facilities) to bank erosion with the passage of crew and work boats.

IX. Shifts in Tax Base

As the population and economy expand, and as changes occur in land use patterns, the potential for physical growth of the urban area also occurs. All of the factors potentially affect the tax base available for local government to provide municipal services.

X. Changes in Recreation Patterns

With increased division of labor and increased income, the manner in which people spend their leisure time will inevitably change. To the extent that these recreational activities are complemented by the actions of local government (such as construction of parks and boat ramps, etc.) they become an indirect impact of OCS activities.

It should be emphasized that the extent of the impact in all of the above mentioned areas will, to a great extent, depend on the make-up and existing facilities of the community being impacted. Thus, a small agriculturally oriented town on the Gulf Coast might experience tremendous increases in employment and income potential leading to significant shifts in the occupations of its inhabitants, increases in the division of labor, and large population increases. This in turn leads to major changes in land use, strains on existing municipal services, and greatly increases potential for environmental destruction. In addition, major changes in tax structure

and recreation patterns would occur. A large industrialized port city with a diverse occupational structure would feel few of these impacts.

A flow diagram has been constructed in an attempt to visually display the sequential relationship between the existing community make-up and OCS related activities (See flow diagram). The question then arises as to which of these impacts are visible and significant in the Morgan City area and the extent of these impacts.

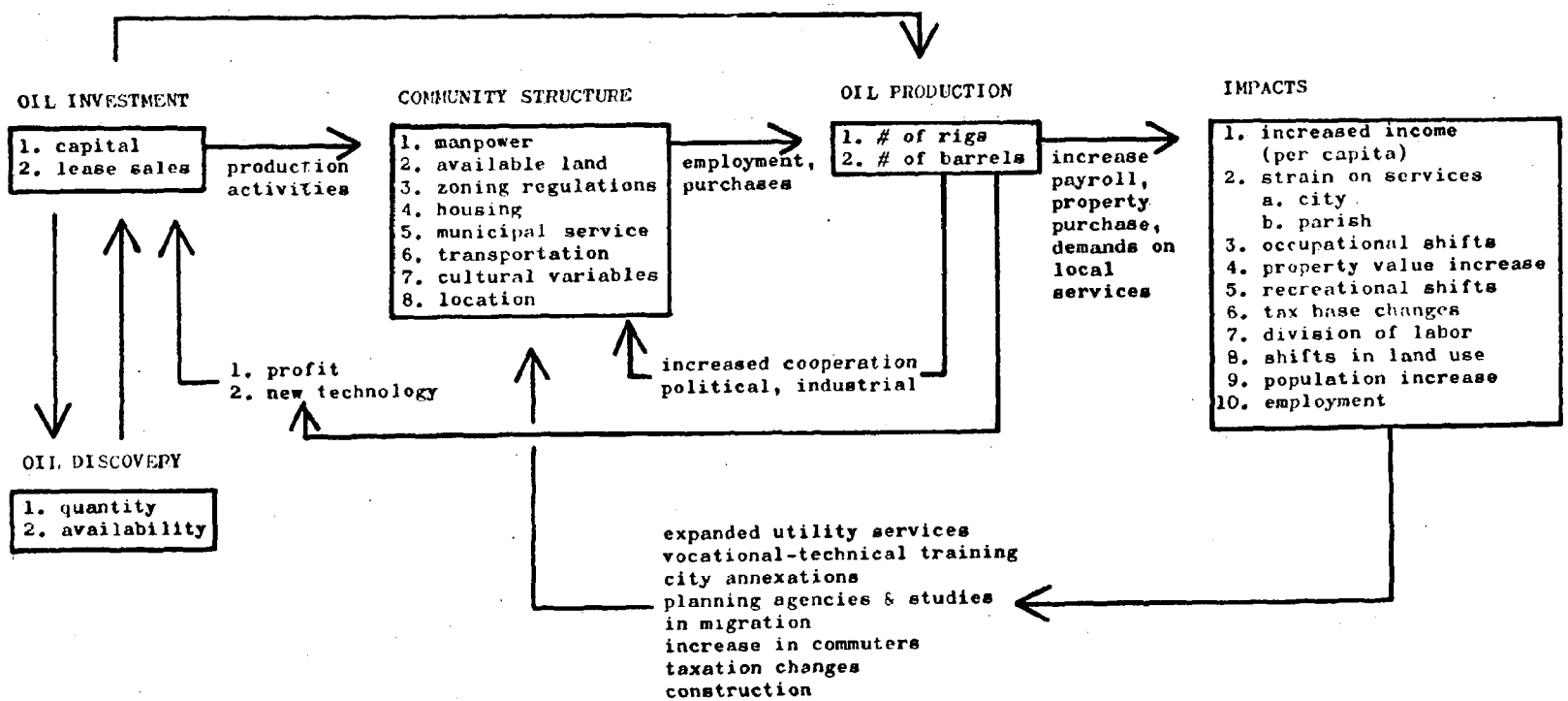
The determination of the exact impact of OCS activities on the economy of Morgan City and St. Mary Parish is difficult and is, in fact, only possible by considering ranges of the viable impact. It is impossible to say with any degree of accuracy, exactly how many jobs or how much income is created by OCS developments. Most of the difficulty lies in the fact that employees' time on-the-job is not separable between OCS work and work performed within the three-mile limit. Needless to say, there are a myriad of economic activities performed by onshore personnel that bear directly or indirectly on OCS activities; e.g., catering services, towing, tugboat, and barge operations, industrial supplies, warehousing, fuel services, personnel ferrying services, etc. It might be said that the determination of such an impact is as much a conceptual matter as one of accounting for each dollar spent or person hired.

Employment.

One approach that can be taken is a comparison of OCS oil and gas production relative to total employment. For instance, between 1961 and 1970, Louisiana OCS oil production averaged 75.0 per cent of total offshore Louisiana oil production. The mean OCS gas production was the same as that of oil from 1961 to 1970. Using this statistic, one might do well to assume that approximately 75.0 per cent of the workers in St. Mary's mining, other transportation, miscellaneous manufacturing, and transportation equipment (other than motor vehicle) sectors were connected with OCS activities. The result is that in 1970, 20.0 per cent of St. Mary Parish's total employment was attributable to OCS activities. Applying the same rough technique to the employment data for Morgan City in 1970 yields the same figure.

It must be remembered that the four industries listed above are known to have strong ties to OCS oil and gas activity. Exclusion of the many remaining industries is due to the subtle, indirect effects that are normally included in a sophisticated technique such as input-output tables. An on-site inspection of Morgan City will convince the reader that the 20.0 per cent employment impact and the subsequent impact on payrolls due to OCS activities is conservative. Unfortunately, existing data resources do not provide sufficient detail to precisely determine the complete direct and indirect impact on Morgan City or St. Mary Parish. Using the 20.0 per cent figure as a conservative benchmark, one might conclude, using the shift-share analysis, that a conservative range of the employment impact in St. Mary Parish from OCS activities is between 20.0 and 35.0 per cent.

FLOW CHART


OIL INVESTMENT
1. capital
2. lease sales
production activities
COMMUNITY STRUCTURE
1. manpower
2. available land
3. zoning regulations
4. housing
5. municipal service
6. transportation
7. cultural variables
8. location
employment, purchases
OIL PRODUCTION
1. # of rigs
2. # of barrels
increase payroll, property purchase, demands on local services
IMPACTS
1. increased income (per capita)
2. strain on services
a. city
b. parish
3. occupational shifts
4. property value increase
5. recreational shifts
6. tax base changes
7. division of labor
8. shifts in land use
9. population increase
10. employment
1. profit
2. new technology
increased cooperation political, industrial
OIL DISCOVERY
1. quantity
2. availability
expanded utility services
vocational-technical training
city annexations
planning agencies & studies
in migration
increase in commuters
taxation changes
construction

To arrive at this range, one need examine the behavior of OCS oil and gas production off the Louisiana coast relative to the regional share effect on employment in St. Mary Parish. From 1940 to 1950, the national growth effect spurred most of the growth of employment in St. Mary Parish. The national growth effect was 294.0 per cent compared to a regional share effect of -31.0 per cent in St. Mary. Furthermore, if one uses the relative growth rate, that is, the ratio of St. Mary Parish's employment growth rate to that of the United States, St. Mary Parish registered decline of -65.8 per cent. For the same period, Louisiana's relative growth rate was -43.9 per cent.

From 1954 to 1960, Louisiana's OCS oil production increased 1375.0 per cent compared to a 208.0 per cent increase in production within the three-mile limit. From 1950 to 1960, the national growth effect in St. Mary Parish was 49.5 per cent; however, the regional share effect was 94.3 per cent. In the same period, OCS gas production rose 388.0 per cent and production within the three-mile boundary increased 435.0 per cent. Finally, St. Mary's relative growth rate from 1950 to 1960 was 102.2 per cent compared to that of 2.4 per cent for the state.

During the period 1960-1970, OCS oil production increased 423.0 per cent and production within three-miles of the coast increased 63.0 per cent. Gas produced beyond three-miles increased 617.0 per cent from 1960 to 1970; however, that produced in the near-coast area rose only 274.0 per cent.

During the same period, there was little change in the national growth effect on St. Mary's employment, 44.5 per cent. However, the effect of the regional share was 50.6 per cent. This lessening in the regional share effect is attributable to the slowing of the rate of increase of OCS oil production. The rate of increase in production within the OCS boundary also slowed; however, the largest decrease occurred in the OCS region. OCS gas production increased in this decade by 617.0 per cent. This increase seems to have provided a buffer, permitting the regional share effect for the decade to be slightly greater than the national growth effect.

Generally, the regional share effect had its greatest impact on St. Mary Parish's employment during the 1950's. It was then that OCS activities increased at a very fast pace. As the rate of OCS production slowed, the regional share's impact was not as great. During this stage in the development of Morgan City and St. Mary Parish, the industrial-mix component became slightly positive, indicating the growth of tertiary sectors and less dependence on the regional growth effects so prominent in the area's early economic development. As the economic base of the parish broadens, it is suspected that the industrial-mix effect will become more important as a contributor to the overall growth of employment and income.

Income.

Income has increased faster in St. Mary Parish than in Louisiana. From 1949 through 1959, effective buying income (disposable income) increased 140.0 per cent in St. Mary Parish and 78.0 per cent in Louisiana. During the period 1959-1969, the same respective increases of income were 211.0

per cent and 101 per cent. The full differential effect of OCS activities, as evidenced in the regional share effect, is exhibited in the higher median income. Both Morgan City and St. Mary Parish have had higher median incomes than Louisiana. This is directly attributable to the regional share effect. Generally, median income was somewhat lower in St. Mary Parish and Morgan City than in the United States due to the poor industrial-mix component. An improvement in the industrial mix of the area should raise incomes during the decade of the 1970's.

Occupations.

As outlined in other parts of this study, Louisiana shared in the decline of agricultural workers over the relevant periods discussed. The exceptionally rapid declines in farmers and farm managers in St. Mary Parish is likely due to the attraction of higher paying jobs in the oil industry. The per cent of workers as farmers or farm managers declined from 2.5 per cent in 1950 to 0.7 per cent in 1970. In the United States, the per cents for the same decades were 7.8 per cent and 1.9 per cent. Even more surprising is that in 1950, 14.0 per cent of St. Mary's workers were farm laborers. By 1960, this proportion dropped to 2.8 per cent, a much greater decline from Louisiana's 4.4 per cent in 1950 and 2.2 per cent in 1960.

The discovery of oil offshore and later in the OCS regions led to an influx of managerial positions in Morgan City. In 1950, 13.2 per cent of the workers were managers compared to 9.1 per cent in the United States. By 1960, the United States had a ratio of 8.4 per cent of managers to total workers, but Morgan City registered 16.0 per cent in such positions. Finally, by 1970, Morgan City's management-to-total worker ratio was 15.6 per cent compared to that of 8.3 per cent in the United States.

In 1950, operatives were 25.4 per cent of Morgan City's workers, compared to 20.1 per cent in the United States and 15.4 per cent in Louisiana. By 1960, Morgan City's per cent of operatives had declined to 21.2 per cent, while that in Louisiana and the United States was 16.4 and 19.4 per cent respectively. These decreases in persons employed as operatives continued until 1970. In Morgan City, the per cent was 16.6 in 1970, 13.4 per cent in the state, and 17.6 per cent in the United States. The significantly greater decline of persons employed as operatives in Morgan City when compared to other regions is attributed to the demand for more highly skilled personnel. As evidenced elsewhere, specialized oil field work and other occupations represented the greatest demand element.

An occupation which indicates this shift toward the skills necessary for OCS and offshore work is craftsmen. In the United States, the per cent of craftsmen declined from 14.1 per cent in 1950 to slightly less than 14.0 per cent in both 1960 and 1970. In Louisiana, the ratio of craftsmen to total workers rose to 12.4 per cent in 1960 and then declined to 11.1 per cent in 1970. However, in St. Mary Parish craftsmen were 11.0 per cent of the workers in 1950, 13.3 per cent in 1960, and 14.3 per cent in 1970.

These differential changes in the occupations, income, employment, and income distribution of Morgan City and St. Mary Parish appear to be significantly different from those of the United States and Louisiana. As exhibited previously, these changes have occurred because of large changes in the regional advantages of St. Mary Parish and Morgan City. The impetus for this regional share effect was provided by the increase in Louisiana OCS oil and gas activities.

Population.

The population growth of Morgan City and St. Mary Parish over the last several decades is undoubtedly linked to petroleum development. The population growth in Morgan City has increased on the average almost twice as fast as that of Louisiana and the United States as a whole. There is simply little to cause this growth other than high in-migration and low out-migration caused by increased employment and income opportunity. The birth rate and death in the parish (or the internal growth rate) is not significantly different from the rest of the parish. Other than its location on major water transportation routes, there is little other than petroleum activities to provide increased employment. Since we can conservatively estimate that 20 - 35% of the employment in the Morgan City area is linked to OCS activities, it is reasonable to assume that a similar growth in population has occurred as individuals move to fill these previously nonexistent jobs. Using 1950 as a starting point, 25% would be a conservative estimate for that portion of the population growth that can be directly linked to OCS activities to the present time. This rapid population growth has been felt primarily in the area of housing and municipal services (See below). The pinch in housing will continue to be felt long after the parish ceases to grow in population, since many residents are living in relatively temporary quarters or are commuting.

Division of Labor.

There is little doubt that there has been an increase in the division of labor in Morgan City. One indication of this is the fact that many of the occupations directly and indirectly related to OCS activity did not exist prior to the onset of offshore drilling in 1947. In addition, many migrants to the area were attracted because of the demand for specialized skills which they possessed, skills not readily found in Morgan City.

There is no way to assign a numerical value to this change. It is sufficient to say that Morgan City has undergone a significant transformation as its economy and population have almost doubled since the onset of offshore activities.

Land Use Shifts.

Land use changes in the study area, while previously large, are slowing as OCS production stabilizes following the initial expansion of activity. It appears unlikely that any additional major demands for land will result from these activities. Continuing small changes can be expected as the

area better adjusts to present or forthcoming conditions. For example, some of the trailer homes may be abandoned as families move into more permanent types of housing. The Bayou Vista area will probably continue to expand, as a bedroom community, because of the new multilane bridge. Therefore, there will likely be a continuing, though small, loss of agricultural land to residential uses. The conversion of additional swampland will be slowed because of environmental considerations.

Environmental Destruction.

Additional environmental impacts associated with OCS activities can be expected to be minimal. In fact, the environment may improve somewhat as sewage treatment facilities are upgraded, solid waste disposal facilities improved, and more care exercised in the handling of fuels and chemicals. The proposed enlargement of Bayous Boeuf, Black, and Chene are unlikely to result in any major expansion of fabricating facilities but rather in a more effective use of the present facilities and less chance of unemployment as Gulf OCS activities decline.

Municipal Services.

The impact of OCS activities on municipal services has been great. Companies have required access roads, gas, water, electricity, and other municipal services. To provide these services, municipal expenditures have risen in a spectacular fashion. Existing services have been expanded dramatically and new services offered to meet the needs of the oil and gas industry, of the population growth experienced, and of the new demands of an urban region.

As an area experiences rapid growth, there is almost always a lag in the development of necessary services. It is difficult for smaller municipalities to anticipate growth and extensively expand facilities. The area does not have the tax base and, hence, monetary resources. Furthermore, growth is not a certainty. Therefore, the development of municipal services are usually a delayed reaction to mounting needs resulting from growth.

Having significant growth as a result of OCS activities can result in problems in providing services. Special needs by this specialized field must be met. Fresh water must be provided to be hauled offshore. The volume and nature of refuse from these activities presents unusual disposal problems. Due to the nature of employees often working seven days on, then seven days off, extensive commuting results. Oftentimes commuters make extensive use of facilities, putting little back in the form of taxes.

The municipalities of the region have responded to the needs associated with growth. Gas, electric, and water lines have been expanded. Large expenditures have had to be made for new water treatment plants, power plants, and waste disposal facilities. The growth has necessitated unprecedented expansion in the study area. Basic thresholds were reached where numerous major developments were necessary. The kinds and volumes of services provided in the towns of Berwick, Morgan City, and Patterson were no longer

adequate for this growing urban region. Not only did existing services have to be doubled, quadrupled, etc., but new needs of this urban population concentration created the need for new municipal services not offered heretofore. Despite the difficulties associated with meeting the demands of a rapidly growing area, residents seem to feel that benefits far outweigh the costs of OCS activities.

Shifts in Tax Base.

Although local officials have been hard pressed in many cases to keep up with the demands for roads, schools, and utilities (See chapters on social and cultural impact and on municipal services). The greatest danger facing Morgan City at the present time is that demands for these services will continue to grow, but with existing housing shortages, settlement will occur outside the city; thus, not providing a growing tax base to meet the demands.

Implications for Coastal Zone Management.

At some future date, oil and gas production from the OCS will decline. Already a shift in production towards the west is evident in the Gulf and away from the study area. Such a decline would have serious economic consequences for the Morgan City area. However, some of the boats, equipment, and rigs produced here are sent to Venezuela, the Middle East, and the North Sea. Conversations with company officials and others indicate that should oil and gas be discovered off the East Coast of the United States that many of the rigs and equipment needed would be fabricated on the Gulf Coast and towed around Florida. Therefore, a decline in Gulf OCS production will seriously hurt the economy of the study area but will be unlikely to result in the extinction of these types of economic activities.

Most of the major environmental and economic impacts associated with the development of OCS production have already taken place. However, some continue such as erosion of stream banks, disposal of fill and solid waste, lack of adequate housing and sewage treatment facilities, and the like. Additional serious impacts will occur in the Morgan City area as Gulf OCS areas are depleted, especially if no major fields are found off the East Coast or if drilling there is too long delayed.

If a coastal zone management program is designed to delineate and to focus attention on these impacts, then it could be of value to the study area. A great deal of planning clearly needs to be done in advance of a decline in OCS production. The job is there; however, it is impossible, without examining a specific coastal zone program, to determine whether or not that program could serve as a valuable tool in ameliorating impacts.

SURVEY OF EMPLOYMENT AND LABOR FORCE CHARACTERISTICS IN MORGAN CITY'S PETROLEUM AND RELATED INDUSTRIES

L. Wilson Trahin

A P P E N D I X I

This segment represents data on current employment in the oil and gas sector of Morgan City as well as that of related industrial sectors. A survey of firms by use of a mail questionnaire was performed in December, 1976. Two hundred firms were sent the questionnaire, of which 66 responded. Total payroll in 1976 of these 66 companies was $94,554,813 and total employees were 8,471.

Using Standard Industrial Classification Codes, firms in the following industries in Morgan City were surveyed:

1311	Crude Petroleum and Natural Gas Production
1381	Drilling Oil and Gas Wells
1382	Oil and Gas Field Exploration Services
1381	Oil and Gas Field Services, NEC
1623	Pipeline Construction
3441	Fabricated Structural Metal
3533	Oil Field Machinery and Equipment
4422	Coastwise Transportation
4454	Towing and Tugboat Services
5084	Industry Machinery and Equipment
5085	Industrial Supplies
	Miscellaneous Services.

Employment and labor force information was gathered using the employees' occupation as the base. Each occupation was segmented into its total employees by race and sex. Subsequently, the number in each occupation was subdivided into those employees with the following types of training: on-the-job training, vocational school training, grade school completion, some high school, high school completion, some college, and college completion.

In addition, interest was expressed in determining the extent of commuting into Morgan City. Each establishment was asked to report the number of employees whose residence in 1976 was in Morgan City, in St. Mary Parish but outside Morgan City, in another parish, or out-of-state.

The information presents an up-to-date picture of the diversity of oil and gas-related employment in Morgan City. In addition, there appears to be a significant number of women in the industry. While it is difficult to compare salary ranges with those in other occupations because of the paucity of data, salaries listed in Table B appear to be higher than the average for Louisiana.

A. EMPLOYMENT BY INDUSTRY

This section of the report indicates the employment distribution by industry, sex, and race in 1976. Women are now working in occupations that were considered to be exclusively for men just a decade ago. Many are working offshore as engineers, chemists, geologists, cooks, and even roustabouts, a term for laborer. Women have been accepted in onshore operations equally well. They serve as dispatchers, warehouse receiving for heavy material, welders, welder/fitters, burners, equipment operators and truck drivers.

Discrimination against women and non-whites rarely is indicated. Recognition of skills regardless of sex or ethnic background is the principle criteria in personnel selection.

The highest concentration of non-white males is in fabricated structural products, 26.0 per cent of the total employees. Following fabricated steel was oil and gas field services, not elsewhere classified, however, only 13 of the 52 employees listed were non-white males.

More than 36.0 per cent of the employees in this survey worked in the fabricated metal products industry. Seventeen per cent were in some form of offshore transportation, a vital part of OCS activity. The industries most closely tied to OCS activities--production, drilling, survey of fields, drilling services, and pipeline construction, employed 23.0 per cent of the workers in this survey.

EMPLOYMENT BY INDUSTRY

BROKEN DOWN BY RACE AND SEX

		MALE		FEMALE		
		WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL
1311	Production	665	109	22	4	800
1381	Contract Drilling	840	92	18	2	952
1382	Survey	46	-	-	-	46
1389	Drilling Mud	34	13	5	-	52
1623	Pipeline	74	2	2	-	78
3441	Fabricated Structural Steel	2137	820	89	43	3089
3533	Machinery & Equipment	264	51	16	-	331
4442	Offshore Transportation	1249	122	32	14	1417
4454	Towing & Tug	84	-	5	-	89
5084	Industry Machine & Equipment	83	10	8	1	102
5085	Industrial Supplies	142	18	34	-	194
	Electronics	143	2	30	4	179
	Miscellaneous Services	1033	69	37	3	1142

B. EMPLOYMENT BY RACE, SEX, OCCUPATION, INDUSTRY WITH WAGES

The firms reporting were separated according to Standard Industrial Classification Manual, with the following groups making up this report:

1311 - Production

1381 - Contract Drilling

1382 - Survey

1389 - Drilling Mud

1623 - Pipeline

3441 - Fabricated Structural Steel

3533 - Machinery & Equipment

4442 - Offshore Transportation

4454 - Towing & Tug

5084 - Industry Machine & Equipment

5085 - Industrial Supplies

Electronics

Miscellaneous Services.

In reviewing the reports by industry, there are several occupational titles that are not used in all companies similarly classified. Wage differentials occur due to several reasons. A major factor is that national oil producing companies accepting a union contract settled in another state would normally affect a raise for local employees. Wages and other benefits continue to be offered by locally owned and managed companies in order to maintain competent workers and to attract skilled personnel.

EMPLOYMENT BY RACE, SEX, OCCUPATION AND INDUSTRY

	MALE		FEMALE			
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL	SALARY (THOUSANDS)
PRODUCTION 1311						
Superintendent	2				2	$24/$45 Yr.
Assistant Superintendent	3				3	
Supervisor	13	1			14	$15/$35 Yr.
Assistant Supervisor	5				5	
Foreman	79	1			80	$16/$30 Yr.
Assistant Foreman	16	1			17	$16/$24 Yr.
Co-ordinators	3				3	$12/$24 Yr.
Employee Relations	2				2	
Officials/Manager	26	1	2		29	
Professional	7	1			8	
Draftsmen	2				2	
Geologist	1				1	
Inspector	2				2	
Clerical	6	3	10	1	20	
Sr. Clerks	3	1			4	$10/$12 Yr.
Intermediate Clerk			1		1	$8/$10 Yr.
Steno			4	2	6	$7/$9 Yr.
Secretary			1		1	$9/$12 Yr.
Switchboard			1		1	
Warehouse Assistant	2				2	
Truck Drivers	2				2	$12/$14 Yr.
Dispatcher	8	2		1	11	$11/$13 Yr.
Chief Operator	6				6	$16 Yr.
Lease Operator	11	7			18	$15 Yr.
Operator	48	2			50	$12/$24 Yr.

Page 2 - Employment by Race, Sex, Occupation and Industry

PRODUCTION 1311 (CONTINUED)	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
Engineers		1			1	$12/$25 Yr.
Civil Engineers	28	1			29	$15/$25 Yr.
Engineer's Asst.	17		1		18	
Maintenance Man	8	2			10	$15 Yr.
Mechanics	18				18	$14/$18 Yr.
Helicopter Mechanic	4	1			5	$12/$16 Yr.
Metermen	11	2			13	$10/$12 Yr.
Welders	3	1			4	$14/$18 Yr.
Electricians	4				4	$14/$20 Yr.
Technicians	21				21	$12/$24 Yr.
Pumper	67	8			75	
Computer Operator	3	1			4	
Tug Captain	2				2	$15/$25/Yr.
Wheelman	2				2	$12/$20 Yr.
Deckhand	2				2	$10/$15 Yr.
Steward	2				2	$10/$15 Yr.
Crane Operator	2				2	$15/$20 Yr.
Helicopter Pilot	9	1			10	$18/$30 Yr.
Leadermen	5				5	$14/$20 Yr.
Head Roustabout	4				4	
Roustabout	74	25			99	
Helpers	28	15			43	$10/$14 Yr.
Chief Cook	3	1			4	$10/$12 Yr.
Cook	2	2			4	$9/$10 Yr.
Cook's Helper		2			2	$8/$9 Yr.
Craftsmen	89	17			106	
Laborers	10	7	2		19	
Service Workers		2			2	

Page 3 - Employment by Race, Sex, Occupation and Industry

CONTRACT DRILLING 1381	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
Superintendent	5				5	
Assistant Supt.	2				2	
Supervisor	20	3			23	$18/$40 Yr.
Supervisor Trainee	3				3	
Managers	3				3	$18/$39 Yr.
Office Manager	1				1	
Foreman	5				5	
Executive	2				2	
Secretarial	1		4		5	$8/$14 Yr.
General Office	1		7	1	9	$7/$10 Yr.
Drafting	1		1		2	$15 Yr.
Salesman	3				3	$22 Yr.
Electricians	12				12	$8/$13 Yr.
Dispatcher	7				7	$9 Yr.
Clerks	3		1		4	$16 Yr.
Safety Director	2				2	$18 Yr.
Sales Coordinator	1				1	
Electrical Engineer	1				1	
Engineers	6	1			7	$19 Yr.
Drillers	47	1			48	$9/$21 Yr.
Derrickmen	56	6			62	$11/$19 Yr.
Motormen	56	1			57	$11/$15 Yr.
Welder	26				26	$12/$16 Yr.
Mechanic	1				1	$13 Yr.
Rig Mechanic	26	1			27	$19 Yr.

Page 4 - Employment by Race, Sex, Occupation and Industry

	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
CONTRACT DRILLING 1381 (CONTINUED)						
Crane Operator	34	2			36	$11/$15 Yr.
Pumpers	3				3	
Shop Hands & Yard Men	9				9	$8/$14 Yr.
Operators	7		4		11	$15 Yr.
Tool Pusher	28	2			30	$24 Yr.
Roughneck	39	9			48	$10 Yr.
Roustabout	115	38			153	$8/$12 Yr.
Wireline Trainee	26	6			32	
Wireline Specialist	36	1			37	
Commodity Serviceman	10	1			11	
Special Tool Man	1				1	
Deckhand	13	2			15	$7/$9 Yr.
First Mate	2				2	$10/$12 Yr.
Ship's Engineer	4				4	$10/$12 Yr.
Captains	11				11	$12/$15 Yr.
Rotary Helper	146	12			158	$15 Yr.
Insurance & Claims	1				1	$16 Yr.
Switchboard			1		1	$7 Yr.
Helpers	8	4			12	$10 Yr.
Cooks	3			1	4	$7/$8 Yr.
Messmen	2	2			4	$6 Yr.
Watchman	1				1	$6 Yr.
Porter/Radio Opr.	1				1	$6 Yr.
Truck Driver	1				1	$7 Yr.
Accountant	1				1	
Steward	1				1	

Page 5 - Employment by Race, Sex, Occupation and Industry

	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
SURVEY WORK 1382						
Boat Captain	14				14	$11/$14 Yr.
Deckhands	12				12	
Cooks	16				16	
Manager	1				1	
Office Personnel	2				2	
Janitor	1				1	$15 Yr.
DRILLING MUD & CHEMICALS 1389						
General Manager	2				2	$23/$27 Yr.
Managers	2	1			3	$15/$19 Yr.
Chief Engineer	2				2	$19 Yr.
Salesman	1	1			2	$18 Yr.
Transportation	1				1	$12 Yr.
Truck Drivers	2	5			7	$14 Yr.
Warehouseman	3				3	$10 Yr.
Engineers	14				14	$10/$18 Yr.
Dispatchers	4				4	$9/$14 Yr.
Chief Accountant	1				1	$18 Yr.
Bookkeeper			2		2	$8 Yr.
Clerical			3		3	$7/$8 Yr.
Yard Foremen		3			3	$14 Yr.
Laborers	2	3			5	$12 Yr.
PIPELINE 1623						
Officers	2				2	
Dredge Captain	8				8	$12 Yr.
Tug Captain	4				4	$10 Yr.

Page 6 - Employment by Race, Sex, Occupation and Industry

	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
PIPELINE 1623 (CONTINUED)						
Dredge Oiler	16				16	$6 Yr.
Dredge D- H	5				5	$5 Yr.
Tug D-H	3				3	$6 Yr.
Superintendent	5				5	
Operations Manager	1				1	
Accountant	7				7	
Secretaries			2		2	
Pilots	1				1	
Radiomen	1				1	
Welders	1				1	$10 Yr.
Machinists	1				1	$10 Yr.
Laborers	3	2			5	$5 Yr.
Dredge Operators	16				16	$9 Yr.
FABRICATED STRUCTURAL STEEL 3441						
Yard Superintendent	6				6	$8 Yr.
Supervisors	33	1			34	$17/$19 Yr.
Pusher	1				1	$13 Yr.
Purchasing Agent	1				1	$14 Yr.
Stockroom Clerk	1				1	$7/$10 Yr.
Warehouse	29	3	1		33	$9 Yr.
Fitter/Welder	4	2			6	$13 Yr.
Welders	736	272	7	14	1029	$7/$15 Yr.
Fitters	378	212	3	16	609	$7/$15 Yr.
Tackers	2				2	$8 Yr.
Fitters Helpers	8	5			13	$10 Yr.
Helpers	3	3			6	$7 Yr.

Page 7 - Employment by Race, Sex, Occupation and Industry

	MALE		FEMALE			SALARY
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL	(THOUSANDS)
FABRICATED STRUCTURAL STEEL 3441 (CONTINUED)						
Engineer	45	2			47	
Electricians	43	8	3		54	$15 Yr.
Carpenters	3	2			5	$11/$15 Yr.
Outside Machinist	3				3	$15 Yr.
Painter		1			1	$15 Yr.
Draftsman	10				10	$14/$15 Yr.
Secretary			17		17	$4/$7 Yr.
Laborers	1	1		2	4	$7 Yr.
Misc. Others	180	60	12	3	255	Up to $13 Yr.
Superintendent	36				36	
Burners	30	34	2	1	67	$7/$15 Yr.
Riggers	167	98		1	266	$7/$15 Yr.
Loftsmen	7	1			8	$7/$15 Yr.
Machinist	15	12			27	$7/$15 Yr.
Blasters & Painters	34	24			58	$7/$15 Yr.
Service Workers	4	4		3	11	$7/$9 Yr.
Heavy Equipment Opr.	122	16			138	$8/$15 Yr.
Truck Drivers	7	8			15	$9/$12 Yr.
Swampers	3	7			10	$7/$8 Yr.
Mechanic	40	12	1		53	$7/15 Yr.
Ultrasonic & X-Ray Technicians	1				1	
Clerks	4		1		5	
General Office			11		11	
Timekeeper	5				5	
Registered Nurse	1		2		3	

Page 8 - Employment by Race, Sex, Occupation and Industry

	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
FABRICATED STRUCTURAL STEEL 3441 (CONTINUED)						
Commercial Programming	10	1	3		14	
Technical Programming	4	1			5	
Systems Analyst	3	1	3		7	
Computer Operator	5	1	2		8	
Keypunch Operator	1		12	3	16	
Assistant Supt.	1				1	
Workmen's Compensation	2				2	
Accountant	5				5	
Sales	3				3	
Insurance	1				1	
Engineer's Aide	3				3	
Supt. Aide	3		1		4	
Accountant Clerks	4	1	4		9	
Executive Secretary			3		3	
Medical Technician	4	3			7	
Maintenance	55	5			60	
Port Captain			1		1	
Assistant Port Capt.	1				1	
Safety Engineer	3				3	
Radio Operator	5				5	
Buyer	1				1	
Port Steward	1				1	
Chief Steward	4				4	
Group Vice President	1				1	
Assistant to V.P.	1				1	
Division Manager	2				2	
Tugboat Capt.	2				2	

Page 9 - Employment by Race, Sex, Occupation and Industry

	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
FABRICATED STRUCTURAL STEEL 3441 (CONTINUED)						
Tug Mechanic	2				2	
Tug Cook	2				2	
Deckhand	6				6	
Messmen	27	16			43	
Barge Clerks	12	3			15	
MACHINERY & EQUIPMENT 3533						
President	1				1	$21 Yr.
Superintendent	1				1	$15 Yr.
Supervisor	13				13	$15 Yr.
Foremen	3				3	$12 Yr.
Managers	3				3	
Office Manager	2				2	$17 Yr.
Sales Office	8	1			9	$13 Yr.
Purchasing Agent	1				1	$10 Yr.
Accountant	1				1	$15 Yr.
Secretaries			14		14	$6/$9 Yr.
Inventory Control	4				4	
Material Clerk	7	9			16	
Stock Room	5	1			6	
Safety & First Aid	1		1		2	
Personnel Director			1		1	
Inspector	9	1			10	
Maintenance	10	2			12	
Welders	56	4			60	$14/$15 Yr.
Machinists	49	4			53	

Page 10 - Employment by Race, Sex, Occupation and Industry

	MALE		FEMALE			SALARY
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL	(THOUSANDS)
MACHINERY & EQUIPMENT 3533 (CONTINUED)						
Riggers	9	1			10	$8 Yr.
Painters	1	3			4	$10/$12 Yr.
Sandblasters		5			5	$7/$8 Yr.
Pipefitters	3				3	$11/$4 $11/9 Yr.
Crane Operator	2	1			3	
Metalizer	2	4			6	
Assembler	42	12			54	
Mechanics	3				3	$12 Yr.
Electrician	1				1	$12 Yr.
Welders Helpers	4				4	$7 Yr.
Helpers	20	1			21	$7 Yr.
Carpenters	1				1	$14 Yr.
Laborers	2	2			4	
OFFSHORE TRANSPORTATION 4442						
President	1				1	$48/$60 Yr.
Company Officers	6		1		7	$12/$50 Yr.
Supervisors	3				3	$10/$20 Yr.
Manager	29	1			30	$20/$35 Yr.
Secretarial			12	4	16	$6/$12 Yr.
Clerks	4		6	1	11	$7/$20 Yr.
Personnel Assistant	2				2	$10/$20 Yr.
General Office	3		1		4	$7/$9 Yr.
Purchasing Agent	2				2	$10/$20 Yr.
Safety Officer	1				1	$10/$20 Yr.
Sales Representative	1				1	$10/$20 Yr.

Page 11 - Employment by Race, Sex, Occupation and Industry

	MALE		FEMALE			SALARY
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL	(THOUSANDS)
OFFSHORE TRANSPORTATION 4442 (CONTINUED)						
Accountant	2				2	$10/$20 Yr.
Adm. Assistant	1		1		2	$10/$20 Yr.
Controller	1				1	$25/$35 Yr.
Assistant Controller	1				1	$15/$25 Yr.
Crew Assignment	2				2	$10/$20 Yr.
Dispatcher	2				2	$8/$10 Yr.
Warehouseman	1	2			3	$8/$10 Yr.
Pilot (Plane)	1				1	$10/$20 Yr.
Driver, Transport	1				1	$8/$10 Yr.
Mechanic	15	3			18	$7/$20 Yr.
Port Mechanic	1				1	$10/$12 Yr.
Port Captain	6				6	$10/$20 Yr.
Captain	78			1	79	$15/$35 Yr.
Mate	66	2	1		69	$11/$20 Yr.
Chief Engineer	1				1	$20/$30 Yr.
Engineers	282	9			291	$10/$20 Yr.
Masters	162	2			164	
AB Seamen	96	20			118	$7/$8 Yr.
Deckhands	253	42	1		296	$5/$10 Yr.
Cooks	115	14	9	8	146	$6/$10 Yr.
AB Cook	2				2	$8 Yr.
Wheelmen	9	1			10	$10/$20 Yr.
Oiler	4				4	$7 Yr.
O.S.	1				1	$7 Yr.
Riggers	66	20			86	$7 Yr.
Mechanics	13	3			16	$7 Yr.

Page 12 - Employment by Race, Sex, Occupation and Industry

	MALE		FEMALE			SALARY
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL	(THOUSANDS)
OFFSHORE TRANSPORTATION 4442 (CONTINUED)						
Electrician	14	3			17	$7 Yr.
Diver	1				1	$10/$20 Yr.
TOWING & TUG 4454						
President	1				1	$21/$30 Yr.
Vice President	2				2	$12/$20 Yr.
Managers	2				2	$18/$20 Yr.
Assistant Manager	1				1	$18 Yr.
Secretary			5		5	$3/$5 Yr.
Port Captain	2				2	$20 Yr.
Captain	28				28	$11/$20 Yr.
Wheelman	12				12	$11 Yr.
Pilot	5				5	$12/$16 Yr.
Mate	3				3	$12 Yr.
Deckhand	28				28	$6/$12 Yr.
INDUSTRY MACHINE & EQUIPMENT - 5084						
President	2				2	$18/$35 Yr.
V.P. - Manager	3				3	$18/$30 Yr.
Supervisors	7				7	$20 Yr.
Managers	4				4	$9/$19 Yr.
Foremen	2				2	$9 Yr.
Clerical			6	1	7	$6/$8 Yr.
Secretary			2		2	$5/$9 Yr.
Parts Counterman	5				5	$7/$12 Yr.
Warehouseman	4	2			6	$10 Yr.

Page 13 - Employment by Race, Sex, Occupation and Industry

	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
INDUSTRY MACHINE & EQUIPMENT - 5084 (CONTINUED)						
Field Mechanic	17				17	$13 Yr.
Shop Mechanic	20	3			23	
Apprentice Mechanic	4	1			5	
Sales	4				4	$18 Yr.
Inside Sales	1				1	$12 Yr.
Outside Sales	2				2	$12 Yr.
Toolroom Man	1				1	$9 Yr.
Janitor		1			1	$8 Yr.
Mechanic Helper	2				2	$7 Yr.
Yardhand	4				4	
Truck Driver	1	2			3	$5/$6 Yr.
Porter		1			1	$6/$8 Yr.
INDUSTRIAL SUPPLIES 5085						
President	2				2	$20/$39 Yr.
Supervisors	6				6	$18 Yr.
Superintendents	1	1			2	
Managers	16				16	$22/$48 Yr.
Assistant Manager	2				2	$11/$18 Yr.
Secretary			4		4	$7/$11 Yr.
General Office	2		12		14	$5/$14 Yr.
Cardex Clerk	1				1	
Administrative Asst.			1		1	$12 Yr.
Senior Clerk			1		1	
Statistical Clerk	1				1	

Page 14 - Employment by Race, Sex, Occupation and Industry

	MALE		FEMALE			SALARY
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL	(THOUSANDS)
INDUSTRIAL SUPPLIES 5085 (CONTINUED)						
Intermediate Clerk	1		1		2	
Inside Sales	10	1	2		13	$7 Yr.
Outside Sales	5				5	$16/$18 Yr.
Sales	18				18	$16/$21 Yr.
Warehouseman	32	6	4		42	$6/$12 Yr.
Purchasing Agent	6				6	
Pur. & Traffic Clerk	1		5		6	
Truck Driver	7	2			9	$8/$9 Yr.
Buyer	2				2	
Shipping Ins. Claims Coord.	1				1	
Expeditor	1				1	
Storeman	4				4	
Bookkeeper	3	1			4	
Computer Clerk	2				2	
Marketing Spec. & Sales	1				1	
Director of Store Operations	1				1	
Organization & Method Spec.	1				1	
Janitor		1			1	
Foreman		2			2	
Painters	3	1			4	
Carpenters	2	2			4	
Draftsmen	1				1	
Finishing Carpenters	3	1			4	

Page 15 - Employment by Race, Sex, Occupation and Industry

	MALE		FEMALE			SALARY
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL	(THOUSANDS)
INDUSTRIAL SUPPLIES 5085 (CONTINUED)						
Parts Specialist	1				1	
Laborers			2		2	
Leadermen			2		2	
Service Tech.	4				4	$23 Yr.
Service Tech. Trainee	1				1	$18 Yr.
ELECTRONICS & ELECTRICAL COMPANIES						
President	3				3	$18 Yr.
V.P. Operations	1				1	$20/$30 Yr.
Sec. Treasurer	2				2	
Manager	23				24	$15/$50 Yr.
Supervisors	1		1		2	$6/$13 Yr.
Secretary			4		4	$5/$8 Yr.
General Office	2		18	1	21	$5/$10 Yr.
Controller	1				1	
Purchasing Agent	1				1	$8
Shop Foreman	1				1	$16 Yr.
Salesmen	2				2	$15 Yr.
Outside Sales	3				3	$12/$16 Yr.
Inside Sales	7				7	$9/$12 Yr.
Warehouseman	6				6	$6/$16 Yr.
Bookkeeper				1	1	$10 Yr.
Janitor		1			1	$4 Yr.
Technicians	40	1			41	$6/$15 Yr.
Switchboard Opr.			4	2	6	$10 Yr.

Page 16 - Employment by Race, Sex, Occupation and Industry

	MALE		FEMALE			SALARY
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL	(THOUSANDS)
ELECTRONICS & ELECTRICAL COMPANIES (CONTINUED)						
Draftsman			1		1	$8/$14 Yr.
Engineers	2				2	$12/$20 Yr.
Electrician	10				10	$8/$16 Yr.
Installer	1				1	$13 Yr.
Motor Shop	9				9	$7/$10 Yr.
Motor Winder			1		1	$12 Yr.
Comb. Ser. & Winder	5				5	$12 Yr.
Comb. Ser. & Rep.	1				1	$12 Yr.
App. Winders	2		1		3	$8 Yr.
Truck Driver	1				1	$9 Yr.
Ship's Mate	2				2	$9/$13 Yr.
Ship's Captain	2				2	$12/$18 Yr.
Engineer	2				2	$11/$13 Yr.
Cook	2				2	$7/$9 Yr.
Roustabout	10				10	$6/$10 Yr.
Inventory Clerk	1				1	$6/$8 Yr.
MISCELLANEOUS SERVICES						
President	1				1	
General Manager	1				1	$24 Yr.
Managers	10				10	$19/$36 Yr.
Superintendent	7				7	$18/$31 Yr.
Supervisors	10				10	$9/$14 Yr.
Secretarial	1		13		14	$5/$6 Yr.
Clerical			4		4	
Diesel Mechanics	2				2	$15 Yr.

Page 17 - Employment by Race, Sex, Occupation and Industry

	MALE WHITE	MALE NON-WHITE	FEMALE WHITE	FEMALE NON-WHITE	TOTAL	SALARY (THOUSANDS)
MISCELLANEOUS SERVICES						
Operators	1	3			4	$10 Yr.
Laborers	3	7			10	$7 Yr.
Blaster & Painter	5	4			9	$9/$12 Yr.
Valve Repair	1				1	$17 Yr.
Helper	16	12	2		30	$5/$10 Yr.
Mechanic	4	1			5	$9/$12 Yr.
Yard Operator		2			2	$9 Yr.
Leaderman	2				2	$9 Yr.
Salaried Employees	2	3			5	
Administrative	3		1		4	$15 Yr.
Warehouseman	12	2	1	1	16	$7/$10 Yr.
Sales	5				5	$18/$25 Yr.
Shop	2	1			3	$6/$14 Yr.
Truck Drivers	5	1			6	$10/$13 Yr.
Dispatcher	1				1	
Stewards	151	9			160	$7/$9 Yr.
2nd Cook	59	1	4		64	$6 Yr.
Galleyhands	600	20	12	2	634	$4/5 Yr.
Deckhands	1	1			2	$6/$7 Yr.
Mate	1	1			2	$7/$8 Yr.
Captain	1	1			2	$10/$12 Yr.
Divers	50				50	$13/$18 Yr.
Tenders	66				66	$6/$11 Yr.
Electronics Tech.	5				5	$15/$18 Yr.
Engineers	1				1	$20/$25 Yr.
Vessel Personnel	4				4	$8/$21 Yr.

C. TOTAL EMPLOYMENT BY RACE, SEX, OCCUPATION

Table C provides a categorization of employment by race, sex, and occupation. Of particular interest is that 2347 males were employed as mechanics, fitters, riggers, welders, and heavy equipment operators. These five occupations represented 29.0 per cent of male employment as reported in the survey. Such a high percentage in these occupations may be a good indicator of the concentration of heavy industries.

Of the 66 firms returning the questionnaire, there were 422 engineers employed, 5.0 per cent of total employees in the survey. There is, in addition, a high percentage of technical and highly skilled persons in the industries surveyed, such as geologists, computer programmers, accountants, and numerous managers.

Employment of non-white males was concentrated in occupations with a significant amount of skill required--welders, fitters, and riggers. More than 46.0 per cent of the non-white males were in these three occupations. It should be realized that these occupations are relatively high-paying, as the salary scales in Table B attest.

Approximately 60.0 per cent of the females employed in the industries surveyed worked as secretaries, clerks, keypunch operators, and dispatchers. However, one unexpected result is that 42.0 per cent of the non-white females in the survey were employed as welders and fitters.

Generally, one discovers that there is a relatively high proportion of workers in Morgan City who perform an activity with some degree of skill required. Although many of these jobs are manually-oriented, the high salary scale has apparently enticed females into these occupations.

EMPLOYMENT BY RACE, SEX AND OCCUPATION

	MALE		FEMALE		
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL
Superintendent	57	1			58
Yard Superintendent	6				6
Assistant Supt.	9				9
Presidents	11				11
Vice Presidents	7				7
Supervisor	106	6			112
Assistant Supervisor	8				8
Foreman	90	6			96
Assistant Foreman	16	1			17
Managers	128	3	3		134
Assistant Managers	3				3
Coordinators	5				5
Buyers	3				3
Purchasing Agent	11				11
Accountants	17				17
Bookkeeper	3		3	1	7
Switchboard Operator			6	2	8
Company Officers	24	4	2		30
Executive Secretaries			3		3
Secretary	2		78	4	84
General Office	16	3	76	6	101
Clerks	26	11	14	1	52
Administrative Asst.	2		2		4
Draftsmen	14		2		16
Controllers	3				3
Dispatchers	22	2		1	25
Employee Relations	2				2

Page 2 - Employment by Race, Sex and Occupation

	MALE		FEMALE		
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL
Geologist	1				1
Inspector	2				2
Computer Operators	10	2	2		14
Safety & First Aid	7		1		8
Registered Nurse	1		2		3
Medical Technician	4	3			7
Insurance Claims	2				2
Workmen's Compensation	2				2
Timekeeper	5				5
Commercial Programming	10	1	3		14
Technical Programming	4	1			5
Systems Analyst	3	1	3		7
Keypunch Operator	1		12	3	16
Radio Operator	6				6
Inventory Control	4				4
Personnel Director			1		1
Personnel Assistant	2				2
Marketing Specialist	1				1
Director of Store Operations					1
Organization & Methods Specialist	1				1
Expeditor	1				1
Porter	1	1			1
Sales	55	2			57
Counter Sales	18	1	2		21
Stewards	159	9			168
Warehousemen	89	15	6	1	111

Page 3 - Employment by Race, Sex and Occupation

	MALE		FEMALE		
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL
Maintenance	73	9			82
Truck Drivers	28	18			46
Mechanics	134	22	1		157
Rig Mechanics	26	1			27
Apprentice Mechanics	4	1			5
Fitters/Welders	4	2			6
Fitters	381	212	3	16	612
Welders	822	277	7	14	1120
Riggers	242	119			361
Painters	5	4			9
Sandblaster		5			5
Blasters/Painters	39	28			67
Electricians	84	11	3		98
Pumpers	70	8			78
Machinist	68	16			84
Electrical Engineers	3				3
Burners	30	34	2	1	67
Loftsmen	7	1			8
Heavy Equip. Operators	122	16			138
Lease Operator	11	7			18
Operator	62	5	4		71
Crane Operator	38	3			41
Dredge Operator	16				16
Leadermen	7	2			9
Tackers	2				2
Engineers	68	4			72
Chief Engineers	3				3

Page 4 - Employment by Race, Sex and Occupation

	MALE		FEMALE		
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL
Civil Engineers	28	1			29
Engineer's Assistant	20		1		21
Installer	1				1
Motor Shop	9				9
Motor Winder			1		1
Comb. Ser. & Winder	5				5
Comb. Ser. & Ref.	1				1
Apprentice Winders	2		1		3
Electronics Tech.	45	1			46
Technicians	21				21
Ultrasonic & X-Ray Technician	1				1
Swampers	3	7			10
Metalizers	2	4			6
Assembler	42	12			54
Carpenters	6	4			10
Finishing Carpenters	3	1			4
Helicopter Mechanic	4	1		1	5
Stockroom Clerk	5	1			6
Special Tool Man	1				1
Crew Assignment	2				2
Parts Counterman	5				5
Tool Room Man	1				1
Purchasing & Traffic Clerk	1		5		6
Store Man	4				4
Parts Man	1				1
Valve Repair	1				1

Page 5 - Employment by Race, Sex and Occupation

	MALE		FEMALE		
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL
Service Technicians	4				4
Service Trainee	1				1
Roughnecks	39	9			48
Roustabouts	203	63			266
Laborers	21	22	4	2	49
Helpers	75	35	2		112
Shopmen	2	1			3
Mechanic's Helpers	2				2
Welder's Helpers	4				4
Fitters Helpers	8	5			13
Rotary Helper	146	12			158
Helicopter Pilot	9	1			10
Plane Pilot	1				1
Craftsmen	89	17			106
Service Worker	4	6		3	13
Metermen	11	2			13
Barge Clerks	12	3			15
Shop & Yard Hands	13				13
Wireline Specialist	36	1			37
Wireline Trainee	26	6			32
Commodity Serviceman	10	1			11
Drillers	47	1			48
Derrickmen	56	6			62
Motormen	56	1			57
Tool Pusher	28	2			30
Pusher	1				1
Janitor	1	3			4

Page 6 - Employment by Race, Sex and Occupation

	MALE		FEMALE		
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL
Watchmen	1				1
Divers	51				51
Tenders	66				66
Miscellaneous	180	60	12	3	255
Port Captain	8		1		9
Asst. Port Captain	1				1
Captains	134	1		1	136
Tug Captains	8				8
Dredge Captains	8				8
Masters	162	2			164
Engineers	288	9			297
Wheelmen	23	1			24
Dredge Deckhands	5				5
AB Seamen	98	20			118
Dredge Oilers	16				16
Tugboat Mechanic	2				2
Chief Cooks	3	1			4
2nd Cooks	59	1	4		64
Galleyhands	600	20	12	2	634
Vessel Personnel	4				4
Mates	74	3	1		78
Pilots	6				6
Tug Deckhands	9				9
Deckhands	309	45	1		355
Oilers	4				4
O.S.	1				1

Page 7 - Employment by Race, Sex and Occupation

	MALE		FEMALE		
	WHITE	NON-WHITE	WHITE	NON-WHITE	TOTAL
AB Cooks	2				2
Cooks	140	16	9	9	174
Cook's Helpers		2			2
Messmen	29	18			47

D. EDUCATION

The education of the employees as originally requested in the survey requires an explanation. It was intended to determine the number in each occupation according to their education. Unfortunately, many of the companies did not fully report this information.

Many of the skills required may be obtained by attending Young Memorial Vocational Technical School in Morgan City. This school has furnished hundreds of skilled men and women since its first class in 1965. Presently, more than 300 attend day classes with approximately an equal number in night classes. Courses taught currently are welding, weld/fitting, diesel, electronics, licensed practical nursing, machine shop, drafting, office occupations, and courses for training persons to apply for licenses to serve as masters/captains, tankermen, mate and deckhands. In August, air conditioning and auto mechanic courses will open for training.

In 1947, the year offshore exploration for oil and gas began, the average hourly wage earner's education was about fifth level. Now the average is about at 12th grade level. The technical skills required to service and operate the more sophisticated equipment will mandate a higher educational equivalency.

As expected, most of the upper managerial positions of the firms in this survey are filled by persons with university degrees. As one progresses down in authority, more supervisory positions are held by persons with on-the-job training, high school diplomas, and vocational school training. Much of the knowledge necessary for such positions is probably best gained in the daily experience of each area of operation.

In the production sector of Morgan City, the survey reveals that there is a predominance of persons with at least a high school diploma. Fabricated metal products exhibit a large percentage of employees with vocational school training, particularly among welders and fitters. Similarly, vocational training and on-the-job training provided a majority of the required skills in offshore transportation.

In contrast to the above sector, towing and tugboat services appear to have a predominance of persons employed with an educational background of less than high school. On a slightly higher scale, the industrial machinery and equipment sector's skill level was concentrated at the high school diploma level.

The actual number of employees with each stated level of skill was given for 2682 persons, 32.0 per cent of the representative sample. Of these 2682 persons, 8.5 per cent had less than a completed high school education and 1492 had completed high school or 56 per cent.

BREAKDOWN BY EDUCATION

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
PRODUCTION 1311					
Superintendent					2
Supervisor			4	2	5
Foremen			36	1	9
Assistant Foremen			5	2	3
Managers				X	X
Professional					X
Geologist					X
Clerical			X		X
Sr. Clerks		3			
Intermediate Clerks		1			
Steno				2	
Secretary				1	
Truck Drivers		X	2		
Dispatcher	X		2		
Chief Operator			X		
Lease Operator		4	12	2	
Operator	3	6	24	5	
Engineers					6
Civil Engineers		2	6	2	4
Maintenance Man					
Mechanics	10				
Helicopter Mechanic				5	
Welders				4	
Technicians			6	11	3

PRODUCTION 1311 (CONTINUED)

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
Tug Captain				2	
Wheelman				2	
Deckhand				1	1
Steward			2		
Crane Operator	1		1		
Helicopter Pilot				8	2
Leadermen		1	4		
Roustabout	X			2	1
Helpers		5	34		4
Chief Cook		1	2		
Cook			4		
Cooks Helper		1	1		
Craftsmen			X	X	
Laborers	X	X	X		
Service Workers	X	X			
Metermen				2	
CONTRACT DRILLING 1381					
Superintendent	X		1		X
Assistant Superintendent	X				X
Supervisor	X		4		3
Super-Trainee	X				
Managers					1
Office Manager					1
Foremen	X		1		
Executives			2		
Secretarial			X		
General Office			X		

Page 3 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
CONTRACT DRILLING 1381					
Drafting			X		
Salesman			3		1
Electricians			X	X	
Dispatcher	X	1	2		
Clerks			3		1
Safety Director	X		X	X	X
Sales Coordinator			1		
Electrical Engineer					1
Engineers			1		7
Drillers	X		X		
Derrickmen	X		X		
Motormen	X		X	X	
Welder			X	X	
Mechanic		1	1		
Rig Mechanic				X	
Crane Operator	X		X	X	
Pumpers	X				
Shophands & Yard Men			X	X	
Operators	X				
Tool Pusher	X		X		
Roughneck	X	X			
Roustabout	X	X			
Administrative Assistant			X		
Wireline Trainee		1	16		15
Wireline Specialist		6	13		18
Commodity Serviceman			1		10

Page 4 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
CONTRACT DRILLING 1381 (CONTINUED)					
Special Toolman					1
Deckhand	X	X			
First Mate	X	X		X	
Ship's Engineers	X	X		X	
Captains	X	X		X	
Rotary Helper	X				
Insurance & Claims			X		
Switchboard			X		
Helpers	No information given				
Cooks	No information given				
Messmen	No information given				
Watchmen	No information given				
Radio Opr./Porter	No information given				
Truck Driver	No information given				
Accountant	No information given				
Steward	No information given				
SURVEY WORK 1382					
Boat Captain	No information given				
Deckhands	No information given				
Cooks	No information given				
Manager	No information given				
Office Personnel	No information given				
Janitor	No information given				

Page 5 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
MUD & CHEMICALS 1389					
General Managers			X		X
Managers	X		X		X
Chief Engineer	X		X		X
Salesmen			X		
Truck Driver	X		X		
Warehouseman			X		
Engineers			X		X
Dispatchers	X		X		
Chief Accountant			X	X	
Bookkeeper			X		
Clerical	X		X		
Yard Foreman	X				
Laborers	X				
PIPELINE 1623					
Officers					2
Dredge Captain			8		
Tug Captain			4		
Dredge Oiler		7	8		1
Dredge Deckhand		3	2		
Tug Deckhand		3			
Superintendent			5		
Operations Manager			1		
Accountant			7		
Secretarial			2		
Pilot					1

Page 6 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
PIPELINE 1623 (CONTINUED)					
Radiomen					1
Welders		1		X	
Machinist			1		
Laborers		5			
Dredge Operator		10	6		
FABRICATED STRUCTURAL STEEL 3441					
Yard Superintendent			X		
Supervisors	X		2		X
Pusher			X		
Purchasing Agent			1		
Stockroom Clerk			X		
Warehouseman			X		
Fitter/Welder	X				
Welder	X	4	289	X	
Fitters	X	6	148	1	
Tackers	X				
Fitter's Helpers		6	7		
Helpers	X				15
Engineers	X				
Electricians		X	X	2	
Carpenters		1	2		
Outside Machinist		1	2		
Painter		X			
Draftsmen			X	2	

Page 7 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
FABRICATED STRUCTURAL STEEL 3441					
Secretarial			6	X	1
Laborers	X				
Miscellaneous	X		255		
Superintendents			X		
Burners	X	X	X	X	
Riggers	X	X	X		
Loftsmen	X	X	X	X	
Machinist	X	X	X	X	
Blasters & Painters	X	X	X		
Service Workers		X			
Heavy Equipment Opr.	X	X	X		
Truck Driver	X		X		
Swampers	X	X			
Mechanic	X	X	X	X	
Ultrasonic & X-Ray Tech.	X		X		
Clerks			X	X	
General Office			X	X	
Timekeeper		X			
R.N.					X
Commercial Programming					X
Technical Programming					X
Systems Analyst					X
Computer Operator			X	X	
Keypunch			X	X	
Assistant Personnel Supervisor			X		X

Page 8 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
FABRICATED STRUCTURAL STEEL 3441 (CONTINUED)					
Workmen's Compensation			X		
Accountant					X
Sales			X		X
Insurance					X
Engineer's Aide			X		
Superintendent's Aidw			X		
Accountant Clerks			X	X	
Executive Secretaries			X	X	
Medical Tech.			X	X	
Maintenance	X	X	X		
Port Captain			X		
Assistant Port Captain			X		
Safety Rep.			X		X
Radio Operator			X		
Buyer			X		
Port Steward			X		
Chief Steward			X		
Group V.P.					X
Assistant to V.P.					X
Division Manager					X
Tug Boat Capt.			X		
Tug Boat Mechanic			X		
Tug Boat Cook			X		
Deckhands	X	X			
Messmen	X	X			
Barge Clerks			X		

Page 9 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
MACHINERY & EQUIPMENT 3533					
President					1
Superintendent			1		
Foremen	2	1	2		
Managers			X		
Office Manager			X		1
Purchasing Agent			X		
Accountant			X		X
Secretarial	X		X		X
Inventory Control	No information				
Materials Clerk	No information				
Stockroom	No information				
Safety & First Aid	No information				
Personnel Director	No information				
Inspector	No information				
Maintenance	No information				
Welders			11	7	2
Machinist	No information				
Rigger	6	2	8		2
Painter	1		3		
Sandblaster	3	2	1		
Pipefitters	1	1	2		
Crane Operator	No information				
Metalizer	No information				
Assembler	No information				
Electrician	No information				

Page 10 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
MACHINERY & EQUIPMENT 3533 (CONTINUED)					
Welders Helper	2	1	3		
Helpers	No information				
Carpenters			1		
Laborers	No information				
OFFSHORE TRANSPORTATION 4442					
President					1
Company Officers			X		4
Supervisor	X		3		
Manager			1		25
Secretarial			15		
Clerks			10	1	1
Personnel Assistant					2
General Office			4		
Purchasing Agents			3		1
Safety Officer					1
Sales Representative					1
Accountant					2
Administrative Assistant					2
Controller					1
Assistant Controller					1
Crew Assignment			2		
Dispatcher			2		
Warehouseman	X		2		
Pilot (Plane)	X				1
Driver	1				

Page 11 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
OFFSHORE TRANSPORTATION 4442 (CONTINUED)					
Mechanic	2				
Port Mechanic	1				
Port Captain			4		3
Captain	56	2	2	7	
Mate	19		4	49	
Chief Engineer					1
Engineers	53		4	239	
Masters	16		53	100	
AB Seamen			3		
Deckhands	262	10			
Cooks	47		1		1
AB Cooks			2		
Wheelman	10				
Oiler			4		
O.S.		L			
Rigger	87				
Mechanics			X	16	
Electrician			X	17	
Diver	1				
TOWING & TUG 4454					
President		X			
Vice President					1
Managers			1	1	
Assistant Manager		1			
Secretary		1	4		

Page 12 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
TOWING & TUG 4454 (CONTINUED)					
Port Captain			2		
Captain		22	2		
Wheelman		12			
Pilot			3		
Mate		3			
Deckhand		25	4		
INDUSTRY MACHINE & EQUIPMENT 5084					
President			X	X	X
V. P. Manager			X		
Supervisors	X		X		
Manager			5	X	2
Foremen		X			
Clerical			5		
Secretary			1	1	
Parts Counterman	X		X		
Warehouseman	X		X		
Field Mechanic	X		X	X	
Shop Mechanic	X		X		
Apprentice Mechanic	X		X	X	
Sales			9		
Toolroom Man			X		
Janitor		X			
Mechanics Helper	X		X		
Yard Hand		X			
Truck Driver			X		
Porter			X		

Page 13 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC. TECH. TRAINING	COLLEGE
INDUSTRIAL SUPPLIES 5085					
President			2		X
Supervisors	2		X		X
Superintendents			X		X
Managers	X		14	X	10
Assistant Managers	X		X		
Secretarial	X		3	1	
General Office	X		11	2	2
Cardex Clerk			1		
Administrative Assistant			X		1
Senior Clerk			1		
Statistical Clerk			1		
Intermediate Clerk			2		
Inside Sales	2		9		
Outside Sales	X		3		1
Sales	X		9		7
Warehouseman	4	4	21		4
Purchasing Agent			5		1
Purchasing & Traffic Clerk			1		3
Truck Driver	3	2	5		
Buyer			1		1
Inside Claims & Shipping Coordinator			1		
Expeditor			1		
Storeman			4		
Bookkeeper			2		2
Computer Clerk			2		
Marketing Specialist					1

Page 14 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
INDUSTRIAL SUPPLIES 5085 (CONTINUED)					
Director of Store Operations					1
Organization & Methods Specialist					1
Janitor		1			
Foreman			2		
Painter			4		
Carpenters		3	1		
Drafters			1		
Finishing Carpenter		2	2		
Parts Specialist			1		
Laborers		2			
Leadermen			2		
Service Tech.			4		
Service Tech. Trainee		1			X
ELECTRONICS & ELECTRICAL					
President		1			
V.P. Operations					1
Sec. Treasurer			2		
Manager	2		10	8	5
Supervisors			2		
Secretary			5		
General Office	5	2	7	6	2
Controller	1		X		
Purchasing Agent	1		X		
Shop Foreman	X		X		

Page 15 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
Salesmen	X		1		
Outside Sales			1		2
Inside Sales			6		1
Warehouseman			3	1	
Bookkeeper			1		
Janitor				X	
Technicians			10	2	5
Switchboard Operator			6		
Draftsman				1	
Engineers				2	
Electrician			4	5	1
installer			1		
Motor Shop			2	3	4
Motor Winder	X		1		
Comb. Serv. & Winders	X		2		
Comb. Ser. & Ref.	X		3		
Apprentice Winders	X		X		
Truck Drivers	X		X		
Ship Mate			2		
Ship Captain			2		
Ship's Engineer			2		
Cook			2		
Roustabout			10		
Inventory Clerk				1	

Page 16 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
MISCELLANEOUS SERVICES					
President					1
General Manager			1		
Manager		2	2	1	2
Superintendent			6		
Supervisor	1		8		
Secretarial			12	1	1
Clerical			4		
Diesel Mechanics		2			
Operators	X		X		
Labor	X	X			
Blasters & Painters		1	7		
Valve Repair					1
Helpers		5	20		2
Mechanics			4		
Yard Operator			2		
Leadermen			2		
Salaried Employees			5		
Administrative			X		X
Warehouseman		X	X		
Sales			3		
Shop		1	2		
Truck Driver	6				
Dispatcher			1		
Stewards	X		X		
2nd Cook	X		X		
Galleyhands	X		X		

Page 17 - Breakdown by Education

	ON THE JOB TRAINING	LESS THAN HIGH SCHOOL	HIGH SCHOOL	VOC.TECH. TRAINING	COLLEGE
MISCELLANEOUS SERVICES (CONTINUED)					
Deckhand		2			
Mate		2			
Captain		1	1		
Divers		10	30		10
Tenders		16	40		10
Electronic Tech.			5		
Ship's Engineers			X	X	X
Barge Personnel			X		
Vessel Personnel		2	2		

NOTE: (X) Indicates that personnel were shown to be in these classifications, but no amounts were given.

E. PROJECTED VACANCIES

Job opportunities in this industrial complex presently is excellent for those who have skills or are willing to learn the skills required. Future opportunities as reported show 2023 job possibilities, from laborer to management position.

The expansion of this industrial area will be greatly enhanced with completion of the Bayou Boeuf, Black and Chene Project. This calls for the widening of the tributaries to 400 feet, which would connect with the Atchafalaya River. The economic and environmental justification has been approved by Congress. However, this project is under review by the Executive Branch.

The occupation needed most in December, 1976, was that of a deckhand. These vacancies represented 23.9 per cent of the total vacancies reported. Welders represented 8.5 per cent; welder's helpers, 5.3 per cent; riggers, 3.8 per cent; wireline trainees and specialists, 2.5 per cent; seamen and divers, 6.3 per cent; and tenders, 4.1 per cent. These categories represent more than fifty per cent of the vacancies represented by 66 companies surveyed. Interesting, almost one-fourth of the reported occupations needed, that of deckhands, requires little skill. There is, however, a significant difference in the salaries paid deckhands relative to that paid welders, etc.

	PROJECTED VACANCIES
President, Supervisor, Manager	26
Outside Sales	27
Counter Sales	18
Warehouse	36
Secretarial	32
Office Manager, Supervisors	35
Clerical	32
Purchasing Agent	
Controller	
Janitor	
Secretary-Treasurer	2
Service Manager	
Operations Manager	1
Electronic Tech.	14
Tool Room Storekeeper	
Field Mechanic	4
Shop Mechanic	14
Production Foreman	1
Assistant Foreman	1
Chief Operator	6
Operator	6
Roustabout	1
Dispatcher	4
Pumpers	
Base Foreman	
Field Foreman	
Systems Tech.	4
Switchboard Operator	2
Lease Operator	
Maintenance	
Port Captain	1
Captain	53
Wheelman	5
Deckhands	485
Pilot	5
Draftsperson	
Engineers	36
Shipmates	69
Ships Engineers	
Ship's Cook	124
Inventory Clerk	1
Dredge Captain	
Dredge Deckhand	
Tug Captains	6
Tug Deckhands	
Dredge Oilers	8
Radiomen	
Welders	172
Machinists	
Laborers	27
Dredge Operator	
Drilling Supervisor	1
Drilling Super-Trainee	2
Shop Foreman	
Shop Hands	12

Page 2 - Vacancies (Projected)

Drilling Superintendent	
Asst. Drilling Superintendent	
Safety Director	
Electrical Engineer	*5*
Yardman	*3*
Drillers	
Derrickman	
Motormen	
Roughneck	
Crane Operator	
Electricians	*25*
Tool Pushers	
Barge Foreman	
Fitters	*37*
Welder	*83*
Welder's Helper	*108*
Tackers	
Truck Drivers	*10*
Crewboat Captain	*2*
Division Manager	
Deputy Division Manager	
Buyer	
Accounting Manager	*1*
Computer Clerk	*1*
Director of Store Operations	
Intermediate Clerk	
Statistical Clerk	*1*
Organizer & Methods Specialist	
Senior Clerk	
File Clerk	*2*
Shipping Inside Claims	
Coordinator	
Expeditor	
Painters	*13*
Carpenters	*12*
Finishing Carpenters	
Inventory Acct. Supervisor	
Utility Leadermen	
Lumber Leadermen	
Cardex Clerk	*1*
Engineering	*1*
Communications	
Marine	
Aviation	
Construction	
Drilling	
Production Operations	*3*
Civil Engineer	*5*
Production Tech.	*1*
Instrument Tech.	*1*
Communication Tech.	
Co-ordinator	
Wireline Operators	*1*
Offshore Leadermen	
Production Operators Offshore	
Offshore Helpers	*4*

Page 3 - Vacancies (Projected)

Land Leadermen	
Land Operator	
Land Helpers	
Mechanics	16
Metermen	
Helicopter Mechanics	1
Chief Cook	
Cook	
Commissary Helper	
Mechanic's Helper	
Blaster/Painter	17
Pipefitter Foreman	6
Pipefitter	6
Rigger	78
Field Representative	
Wireline Trainee	30
Wireline Specialist	20
Wireline Supervisor	1
Operations Clerk	
Valve Repairman	2
Parts Manager	
Porter	
Chief Engineer	
Service-Tech. Trainee	2
Assistant Controller	
Outside Machinist	
Crew Assistant	
Port Mechanic	
Area Sales Manager	
Domestic Operations Manager	
Intl. Operations Manager	
Offshore Area Manager	
Assistant Int'l Manager	
Diver	60
Installer	1
Able Body Seamen	66
Ordinary Seaman	2
Able Body Cooks	4
District Rep. Employee Relations	
Representative Employee Relations	
Geologist	
Construction Inspector	
District Super. Gas	
Gas Engineer	
District Petroleum Engineer	
Petroleum Engineer	
Associate Engineer	
Dist. Super. Material Supply	
Assistant District Super.	
Supervisor	
Computor Operators	
Tenders	82
Vessel Personnel	4
Plumbers	1
Upholstry	
Glass Mech.	2

Page 4 - Vacancies (Projected)

Diving Mechanic	*1*
Glass Helpers	*1*
Craftsmen	
Metalizer	
Assembler	
Material Clerk	
Rotary Helper	
Insurance	
Steward	
Watchman, Security Guard	
Barge Clerks	*3*
Messmen	*5*
Accountant Clerks	*2*
Commercial Programmers	*2*
Keypunch	*1*
Heavy Equipment	
Operator	*5*
Swampers	*3*
Burners	*1*
Tool Machine Operator	*5*

F. INDUSTRY COMMUTING PATTERNS

The drilling, production, and related services spreads its economic benefits far beyond the Morgan City area. This report shows a total employment of 8471, with 1728 employees living in the eastern half of St. Mary Parish, and 688 in the west half. Almost every parish is affected by the offshore impact.

The work schedules established for the offshore work provides opportunity for the employee's family to reside in other states. Presently, the work schedules are seven days on, or fourteen days on, with equal time off. On the job offshore calls for 12 hours per day. This provides for overtime; consequently, the wages are considered relatively high.

There were 651 persons working in Morgan City who commuted from Assumption Parish. These Assumption residents represented 7.7 per cent of total employees in this survey. More than 87.0 per cent of these 651 persons were in the fabricated metal industry.

Lafourche Parish was the residence of 718 persons in the survey or 8.5 per cent of the total 8471 employed persons. Once again fabrication yards attracted most of these residents, however, 8.5 per cent of the Lafourche residents were employed in coastwise transportation sector. The largest number of near-parish commuters, 734, were from Terrebonne Parish. They too were concentrated in the local fabrication yards and in coastwise transportation. Finally, 543 persons working in the Morgan City area listed as residences, the states of Texas, Arkansas, Mississippi, Alabama, Florida, and Oklahoma.

INDUSTRY COMMUTING PATTERNS

	1311	1381	1382	1623	3341	3533	4442	4454	5084	5085	Elect.	Misc.
Wax Lake to East Line, St. Mary	150	115	45	31	617	16	133	58	53	102	144	264
Wax Lake to West Line, St. Mary	15	12	41	5	371	51	25	4	13	28	6	117
Assumption Parish	6	2			567	12	10	1	8	19	6	20
Lafourche Parish	4	5		1	586	3	60		9	17	8	25
Terrebonne Parish	11	3	5	1	579	5	60	1	14	14		41
Lafayette, La.	13	8			X					7		
Abbeville, La.	10											
Basile, La.	5											
North, La.	2											
Lake Charles, La.	1											
New Orleans, La.	1				X							
Loreauville, La.	2											
New Iberia, La.	8	1			X					2		
Broussard, La.	1											
Gueydan, La.	8	1										
Jennings, La.	2											
Erath, La.	1											
Eunice, La.	1							2				
Minden, La.	5											
Ville Platte, La.	1											
Alexandria, La.	4											
Palmeto, La.	1	1										
Many, La.	1											
Hackberry, La.	1											
Lake Arthur, La.	2											
Coushata, La.	3											

Page 2 - Industry Commuting Patterns

	1311	1381	1382	1623	3341	3533	4442	4454	5084	5085	Elect.	Misc.
Shreveport, La.	1											
Mansfield, La.	1											
Tioga, La.	2											
Churchpoint, La.	1											
Kaplan, La.	1											
Pineville, La.	1											
Angola, La.	1											
Opelousas, La.	2											
Mamou, La.	3											
Vidalia, La.	1											
DeRidder, La.	1											
Acadia Parish	6											
Calcasieu Parish	3											
Cameron Parish	5						1					
Iberia Parish	16						4					
Rapides Parish	7											
St. Landry Parish	22	1			X							
St. Martin Parish	9								1		1	
Vermilion Parish	14						2		1			
Catahoula Parish		1										
Baton Rouge, La.		1						2				
Campti, La.												
Washington, La.												
Cottonport, La.												
Iowa, La.												
Breaux Bridge, La.								1				
Plaquemine, La.					X			1				
Jefferson Parish		1			X				3			

Page 3 - Industry Commuting Patterns

	1311	1381	1382	1623	3341	3533	4442	4454	5084	5085	Elect.	Misc.
Ascension Parish					X					3		
Pierre Part, La.										2		
Delcambre, La.										1		
Arnoudville, La.										1		
Scott, La.										1		
Gretna, La.					X					1		
Louisiana		33				9					345	
Texas	4	8			6		1	1				200
Arkansas	2	2			3							
Mississippi	4	106			35			4			17	65
Alabama		13			17							34
Florida					7							10
Oklahoma	2											
Ohio												
Unspecified	19	575	7	40	146	58	1224	8				23
California												25
Avoyelles Parish					X							

X - Indicates that employees are living in area, but no numbers specified.

NOTE: No information given on 1389

MANPOWER SURVEY
CHAMBER OF COMMERCE SERVING
MORGAN CITY, BERWICK, PATTERSON AREA

1. NAME OF FIRM _____

2. KIND OF BUSINESS _____

3. NAME OF PERSON REPORTING _____

4. TITLE _____ 5. DATE _____

6. NUMBER OF PEOPLE ON PAYROLL _____

7. PRODUCT AND/OR SERVICE _____

8. ANNUAL PAYROLL 1976 _____

9.	10.	11.				12.	13.	14.	15.								16.	17.
									TRAINING & EDUCATION									
JOB TITLE OR OCCUPATION	WORK SCHEDULE	MALE		FEMALE		NO. OF CURRENT VACANCIES	EST. EMP. NEEDS FOR JOB - 1978	SALARY RANGE	ON JOB TRN.		LESS THAN HIGH SCHOOL		HIGH SCHOOL		VOC. SCHOOL TRN.		COLLEGE	ANNUAL % EMPLOYEE TURNOVER	EMPLOYEE'S FAMILY RESIDENCE - SHOW NO. OF EMPLOYEES LIVING IN AREA SHOWN IMPORTANT: USE ADDITIONAL SHEET IF NECESSARY
		WHITE	NON-WHITE	WHITE	NON-WHITE														
																			A. WAX LAKE TO EAST LINE- ST. MARY PARISH _____
																			B. WAX LAKE - WEST TO ST. MARY PARISH LINE _____
																			C. ASSUMPTION PARISH _____
																			D. LAFOURCHE _____
																			E. TERREBONNE _____
																			F. LIST NO. IN OTHER LA. CITIES & PARISHES & CITIES IN OTHER STATES _____

A P P E N D I X I I

AN HISTORICAL GEOGRAPHY OF THE MORGAN CITY AREA, 1700-1950

--by Dr. Timothy F. Reilly
Assistant Professor
Dept. of Social Studies
University of Southwestern Louisiana

The historical geography of the port of Morgan City-Berwick provides a classic example of a community's steady endurance in the face of serious environmental hazards. Morgan City-Berwick's surrounding hinterland, for a radius of at least 40 miles in all directions, is in large part a spongy morass of cypress swamps, muddy bayous, and canal dredgings amid slender projections of cultivated levee backslopes. As a population cluster, Morgan City-Berwick does not owe its existence to these inauspicious factors, but to its famous crossroads position at the southern margin of the Atchafalaya Basin.

This vast fresh-water swamp region is drained by the Atchafalaya River, a former distributary of the Mississippi River. Both nature and man have intervened in such a way as to change both the function and orientation of this deep and treacherous stream. Nevertheless, the swamplands on either side of the river have continued to pose a considerable barrier to transportation routing, agricultural expansion, and human settlement.

For centuries, man's only means of crossing the Atchafalaya was along its complex maze of waterways. As late as 1863, east-west passage through the Atchafalaya Basin was commonly limited to two routes: one means of communication utilized Bayou Plaquemine and the upper Grand River between the Mississippi River just south of Baton Rouge and Bayou Courtableau on the western side; another route, located to the south, followed a primitive canal between Bayou Lafourche and Lake Verret. The water connection continued westward to Lake Palourde and finally to Grand Lake. There were minor water routes within the Basin, itself, but these two provided circuitous access to Louisiana's lower Mississippi River settlements.[1]

Two separate waterways traversed the interior swamp wilderness from north to south. The Atchafalaya River, itself, provided a major, albeit dangerous, route from the Red River lowlands southward to Grand Lake and the Lower Atchafalaya River. Another parallel passage by way of Grand River along the eastern fringe of the swamp was of comparatively minor importance. Later on, transportation routes around and through the Basin were spurred by the development of three nearby agricultural districts as well as the need for a continuous land-and-water route between New Orleans and the Texas frontier lands.[2]

The first agricultural settlement complex included the cultivated lands along the lower Mississippi River valley from the Felicianas southward to New Orleans. As the "cradle of Louisiana's civilization," the area served as a coreland and staging area in the expansion of rural frontiers. Both the early German Coast of St. Charles and St. John the Baptist parishes, begun in 1720, as well as the Acadian Coast of St. James and Ascension, established in the 1760's, played significant roles in populating this riverine country. In the meantime, growing numbers of Creole and Anglo-Saxon planters eventually succeeded in making the region one of the richest in the rural South.[3]

A second zone of human settlement and agricultural expansion developed as an adjunct of the Mississippi river district. Both Acadians and Anglo-Saxons were instrumental in developing the elongated stretch of cultivated

lands on either side of Bayou Lafourche, a former distributary of the Mississippi. By the 1830's, continuous settlement had spread as far south as Lockport.[4]

While the slightly higher riverine lands along the eastern side of the Atchafalaya Basin were being developed, the lands beyond the western and southwestern margins of the Basin were experiencing similar agricultural and pastoral beginnings. Both the Opelousas Prairie and the transitional Bluff Terrace became important population centers for migrating Acadian petits habitants and smaller numbers of Anglo-Saxon planters and plain folk. More importantly, the Attakapas Prairie stretching along Bayou Teche served as a settlement compound for Anglo-Saxon indigo and sugar cane planters as well as Acadian farmers and fisherfolk. Indeed, the sugar cane culture which was to develop along the meandering banks of the Teche acquired a distinction and character second only to the sugar producing districts along the lower Mississippi and Lafourche areas.

The site now occupied by Morgan City-Berwick played a significant role in the distribution of different peoples, and in the shipment and exchange of goods. The east-west transport system which crossed the Atchafalaya from the Lafourche to the Teche utilized the water complex on the immediate fringe of present-day Morgan City. Furthermore, both of the north-south water routes which crossed the swamp converged at the point where the lower Atchafalaya River leaves Grand Lake in its final passage to the Gulf of Mexico. And finally, the Bayou Teche district, itself, regularly exported its agricultural harvests at the lower threshold of the Basin, while it imported finished supply goods and luxuries through the same funnel.[5]

While the Morgan City-Berwick site was not ideal in terms of its local elevation, drainage, flood protection, amount of readily available living space, and hinterland accessibility and potential for development, the boat landing nonetheless gained viability and importance by serving the transport needs of outlying areas engaged in cross-country trade. As long as a crudely fashioned nineteenth century commercial network relied heavily on the technology and relative economy of water transport, the Morgan City-Berwick area played a meaningful role in both the intra-regional and inter-regional contexts.

The railroad lifeline, itself, was gradually successful in replacing the paddle wheeler and sailing vessel, but only after an extended partnership with the established water transport system. The actual routing of the east-west railroad through Morgan City-Berwick was chiefly the result of the success of the old water routes. The rail system first served as an important link between the land-cushioned port of New Orleans and an important coastwise steamship line; later, the railroad's ultimate extension across the breadth of Louisiana paralleled the Teche waterway, by then the focus of a large and thriving population. In its final stretch, the railroad headed straightway across the Great Southwest Prairies to the Texas border.

In the millenium before the coming of the white man, the lower Atchafalaya Basin was largely dominated by the Chitimacha Indians, who at one time numbered around 2,000. Like most coastal areas in eastern North America,

population was sparse compared to Indian populations in Middle and South America at the time of European contact. The lands fringing Grand Lake, the lower Atchafalaya River, Lake Palourde, and Bayou Teche disclosed a sprinkling of small villages of palmetto-thatched huts. Life was simple and generally peaceful. Both the Chitimacha and their more war-like neighbors to the west, the Attakapas, were probably of the same family.[6]

Wild berry, grape, pumpkin, and maize furnished part of the vegetable diet, along with wild bean and potato. Waterfowl, deer, and the smaller game of the forest provided a regular supply of meat. Pirogues, hollowed out of cypress trees and given shape by means of fire, were essential craft used in inter-village communication and fishing expeditions on the numerous lakes and rivers. Village middens attest to an abundance of shellfish; large quantities of catfish, garfish, crawfish, and bass were also extracted from fresh and brackish waters. Shrimp, crab and other seafoods came from the deeper waters of the Gulf of Mexico. Tribal fishermen utilized the simple hook-and-line, as well as a crude fishing net of forest vine stretched across a circular frame. The apparatus was usually placed at the mouth of a bayou. Another instrument, the fish trap, was fashioned out of wooden slats and contained a funnel-type opening. Concealed bear pits, blow guns made from cane shoots, and arrows of cane and thistledown were some of the other means of securing food.[7]

During the first half of the eighteenth century, the Chitimacha in the Grand Lake-Bayou Teche district were almost entirely isolated from European civilization. The Chitimacha to the east, however, were heavily decimated by military assault before they acquiesced to the French. After 1750, the western villagers followed suit by offering little resistance to the encroaching white hunters, trappers, and farm folk emanating slowly across the bayous and marshes of the Deltaic Plain.[8]

The founding of the French colonial seaport of New Orleans in 1718 helped to end the Indian culture's secure isolation, but the penetration of French-Acadian settlers after 1762 posed an even greater threat to the continued existence of the Chitimacha tribe. As refugees from their British-occupied lands in Canada, the Acadians introduced their Roman Catholic faith and semisubsistence agriculture to non-British south Louisiana, where they hoped to reassert their independent way of life.[9]

The culture of the Chitimacha was almost entirely obliterated by "Cajun society" during the nineteenth century. Intermarriage with white and black substantially diluted the tribe of its biological separateness; Roman Catholicism replaced Indian religious beliefs; a French patois coupled with pidgin English gradually eroded the native language; the introduction of European disease undoubtedly emptied many villages of their inhabitants; and the new importance of European and American money influenced the hasty sale of valuable Chitimacha acreage. The art of pottery-making among the Chitimacha died out before the middle of the nineteenth century; the highly praised skills used in basket-weaving gradually faded away by the middle of the following century.[10]

Today, there are no full-blooded Chitimacha, and daily life among mixed-blooded descendants is not too different from the adjacent white and black folk. Assimilation with non-Indian culture since World War II is nearly completed. Only the reservation at Charenton remains as a touchstone of cultural identity and as an important link with the past. Fewer than three hundred persons comprise the surviving Chitimacha.[11]

At the beginning of the eighteenth century, there were perhaps as many as 20 Chitimacha settlements in the vicinity of Grand Lake and Bayou Teche. Tchat Kasitunshki, now Charenton, is the sole survivor. It occupied a central point vis-a-vis the other villages, some of which had strategic function or cultural significance. Shoktangi hane hetchi'nsh, located three miles north of Charenton on an inlet of Grand Lake, contained the tribal lodge for religious dances and the principal burial ground; at the western end of Grand Lake, Hipinimtch namu served partly as a portage facility. Significantly, another small Indian settlement, Tchati Kutingi namu--"village by the great bayou"--was located at the confluence of Bayou Teche and the lower Atchafalaya River. This east-end community may have been a convenient way-station for the pirogue fishermen and traders as they drifted along one of the earliest water routes known to man.[12]

The earliest observations recorded by visitors to the Atchafalaya Basin do not provide a great deal of specific detail concerning the Morgan City-Berwick site. There are general descriptions of usable waterways and unusual plants, but there is limited material relating to locations which were destined later for greater strategic significance, population, and trade. Nonetheless, a few of the early travelers' casual statements on the Morgan City-Berwick environs are worthy of scrutiny. At the time of the American Revolution, one writer noted that the land surrounding Grand Lake was a low and swampy terrain, heavily timbered with cypress and oak, and criss-crossed by braided streams, some of which were navigable:

> At a little diftance from the foutheastern fhore of the lake Chetimachas /Grand Lake/, is an ifland where perfons paffing that way generally halt as a refting place. Nearly oppofite this island, along the weftern fhore, there is an opening which leads to the fea. It is about 150 yards wide, and has 16 or 17 fathoms water. From the lake along this opening it is 3 miles to the Tage /Teche/ river, which is on the North fide. Three fmall rivulets fall in on the fame fide, in the above diftance; and 3 miles below the Tage river on the weftern fide is a large favanna /savanna/ known by the name of Prairu de Jacko .... From this favanna it is about 33 miles to the fea.[13]

At the outbreak of the War of 1812, almost 30 years later, another well-known account gave a good description of the lower Basin's stream drainage and navigation obstacles, but little was said of the Morgan City-Berwick site:

> ...The current of the Chafalia is gentle till it is joined by the Plaquemines about one hundred and fifty miles from the outlet on the Mississippi, where its velocity is considerably increased. It communicates with Lake Natchez by means of several bayous, the largest of which is bayou Long. This bayou is connected with lake Flat, Grand river, and Grand lake, by means of several bayous, most of which are navigable in the season of high water. Grand Lake is about forty miles long, and from three to ten miles wide, into which the Chafalia is emptied by a channel of about two hundred and fifty yards wide; and a depth of nearly forty feet. It then passes through Berwick Bay, which is from half a mile to two miles wide, and from sixty to eighty feet deep; and after a course of about twelve miles, it falls into Vermillion /sic/ bay, which is an arm of the gulf.... The bayou Tersh /Teche/, which affords a navigable communication with the settlements in the Atakapas /sic/, joins the Chafalia near Grand lake....[14]

An earlier description of Bayou Tech portrayed the stream's navigational attributes, but also sketched a cultural atmosphere of transition from primitive Indian settlement to European dominance. At the time of the American Revolution, the native Chitimacha had quietly retired to the isolation of their remnant territories while the first movements of a more exuberant and aggressive population trickled into the fertile lands along the Teche. The area was destined, of course, to be in the principal hinterland for Morgan City-Berwick:

> In afcending the Tage river, it is 10 leagues from its mouth to an old Indian village, on the Eaft fide, called Mingo Luoc, which fignifies Fire Chief. From this village to the habitation of Monf. Mafs, which is on the Weft fide, it is 2 leagues. One and an half leagues further up, on the Eaft side, is the village de Selieu Rouge, from whence there is a portage of half a mile to lake Chetimacha. Two leagues further up the river, and on the Weft fide, is the habitation of Monf. Sorrel. From whence, to the town la Nouvelle Iberie, on the fame fide, it is tolerably well fettled. From this town about fix leagues wefterly acrofs the country is fituated the village de Skunnemoke or the Tuckapas /near Lafayette/, on the Vermillion /sic/ river....The river Tage, is in general better than 100 yards wide, with gentle current, and a fmall ebb and flow of about 8 or 10 inches. It narrows as you afcend it, where in fome places, it is not 50 yards over. Veffels drawing from 7 to 8 feet water may go from the fea to this town without any obftructions....[15]

Around 1802, only "one hundred souls" resided in the two Indian villages along the lower Teche. Farther west, a sprinkling of Attakapas Indians continued to occupy a few holdings "on the Bayou or creek of Vermilion." Estimates on population growth within the Attakapas and Opelousas regions indicate a relatively slow-paced beginning. In 1785, about 2400 persons--7.5 per cent of the population total for the Louisiana territory--occupied the southwest prairie country. Almost a generation later there were only about 3900 settlers, a little over 9.0 per cent of the territory's total before American purchase. In 1785, about half of the 2400 total was white, the other half slave; by 1802, about 64 per cent was white (out of a population total of 3900), while 36 per cent was black.[16]

Most of the white settlers in the Teche district were French Acadian and Creole, with a handful of Spanish and Anglo-Saxons. The district was said to "abound in cattle and horses," and possessed "a large quantity of good land." And while much of the agricultural produce was sent to New Orleans by way of the Gulf, most was transported in simple batteaux along the lakes and bayous once used by the sedentary and semi-nomadic Indians and their successors, the fur trappers and subsistence cultivators.[17]

During the first decade of American administration, the population of Attakapas and Opelousas was said to total about 3100 whites and 3000 slaves. Settlement and population growth were still said to be hampered by the forest and swamp barriers of the Atchafalaya Basin, as well as the western jurisdiction of the colonial Spanish, whose "extreme jealousy and caution" made further penetration uncertain.[18] The remote character and nebulous administration of extreme southwestern Louisiana helped to create a cultural vacuum throughout most of the nineteenth century. For generations, this "No Man's Land" between the Attakapas-Opelousas country and the Sabine river served as a backwoods frontier for desperadoes, squatters, and marginal farmers.[19]

In a westward journey from the older plantations along the lower Mississippi river above and below New Orleans, the early Teche region was a midway point between civilization and frontier barbarism. While several of the settlements on the Teche were copies of the riverine lands farther east, rough edges were still apparent in the architectural standards, house size, roads, and cultivated clearings.[20]

> The Atakapas /sic/ and Apalousas /sic/ are situated on the right bank of the Chafalia. The first bounds on the gulf, and the second joins it on the north, and spreads between it and Red river. These include the oldest and most opulent settlements in this quarter. Those in the Atakapas are generally formed along the Bayou Tersh, and some other bayous of inferior note. The lands near the Chafalia are low and swampy, though some of them abound in excellent timber. Most of those along the seacoast are also covered with swamps and marshes; yet small tracts are occasionally found sufficiently elevated for cultivation, and extremely fertile. The interior of the district is diversified by prairies and bayous; and along the latter, to the depth of two

> or three hundred yards, plenty of wood is to be found. The lands suitable for cultivation extend in narrow borders along on each side of the bayous; the rest of the land is low and boggy, and fit only for the pasturage of cattle. Such, however, is the number of bayous, that the elevated lands are nearly equal in quantity to those of a low and spungy /sic/ nature. The soil is of a luxuriant quality, calculated for the growth of the sugar cane, tobacco, cotton, indigo, corn, and rice. Perhaps the lands along these bayous are not exceeded in fertility by any tracts of the same extent in Louisiana. The country is pleasant, and the inhabitants are furnished with plenty of fish, oysters, crabs, and wild fowl; as also with the orange, and all other fruits, vegetables, and plants, incident to the Delta. The climate in this district is nearly similar to that of the Delta; with the advantage, however, that it is refreshed by breezes from the sea....[21]

One early observer of the Teche made the brilliant deduction that the stream "must have derived its channel from a state of things which no longer exists, and the waters which flowed in its present course must have formerly been vastly more abundant." The author based his remark on the Teche's considerable depth and width despite its limited water source. He noted that the tide often flowed past the town of New Iberia, enabling vessels of five feet draft to penetrate the remote ports upstream. The elevated and broad levees along the stream signalled earlier alluvial depositions of immense proportions. And despite the bayou's complex meanderings, the author observed that "the channel is as regular as though formed by a skillful engineer."[22]

Indeed, subsequent studies were to reveal that Bayou Teche was the third in a series of streams flowing through the Attakapas country. Preceding the placid Teche was the broader and more turbulent Red River, which now serves as the Atchafalaya's all too generous tributary. And in an earlier period, the Mississippi river, itself, poured through Attakapas before a series of dislocations farther east. Both the Teche and its borderlands are the gift of the Mississippi.[23]

Upon superficial examination, the abundance of streams and lakes led many viewers to believe that transportation was no problem for the early settlers. Although there were continuous water routes with New Orleans, there existed the ever-present challenge of hazardous navigation due to seasonal water fluctuations. At the beginning of the nineteenth century, "vessels of sixty or eighty tons burthen" passed from the Gulf to the middle portion of the Teche. But travel up the Atchafalaya was difficult if not impractical, while a large vessel was unthinkable for navigating the bewildering maze of waterways separating the lower Atchafalaya river from New Orleans. Coastwise passage through the Gulf of Mexico, itself, was made both difficult and dangerous by the interdigitating coastal marsh.[24]

One early source characterized the Plaquemine passage to New Orleans as the "most used in transporting articles of commerce," adding that cargo was usually placed on board "large barges from 20 to 50 tons burden." At the beginning of the nineteenth century, the navigation of Bayou Plaquemine was said to be feasible only when the Mississippi river was high enough to spill through the outlet.[25] By mid-century, the route still provided a haphazard means of transport as it flowed past fertile cotton fields and dark swamps of cypress and gum:

> As we passed up the Mississippi, upon aproaching /sic/ the entrance to.../Plaquemine/ bayou, our steamer edged along by the side of a huge raft of drift stuff, lodged at the junction..., and above this, at the distance of a few rods, was another bold raft, ragged as a patch of windfalls, and threatening as a nest of snakes. Between these two rafts the water draws in from the Mississippi with great force, and at this point our boat entered. She passed up as though she were bound for a higher point on the river, until her bows were nearly opposite the lower part of the upper raft, when all of a sudden the thought seemed to occur to her that she would visit Attakapas--she turned her water-rooting snout towards the opening between the rafts, and in a few moments she plunged into one of the most crooked, uncivilized bayous that nature ever invented. It is so crooked that a water snake would be likely to lose the natural channel and run into the woods. The boat no sooner wheels around one elbow that she prepares to wheel another, and then another and another, so that there is no end to her wheeling. At some point one would suppose the boat had found the end of the bayou, and was bound to run right straight into the woods, when suddenly the channel takes a short crook, and the waters roll around a point, and the steamboat saves her bacon and moves on. At some places the boat brushes the woods, at others it shaves a point, and at others it hugs the shore.[26]

The Atchafalaya river was alternately praised and criticized for its navigability by early reporters. William Darby noted that the Atchafalaya's relatively straight course southward from its junction with the Red river shortened travel distance to the Gulf by 127 miles. He also stated that the navigator encountered fewer obstructions in Atchafalaya Bay than at the Mississippi's mud-choked delta. Darby contended that only "the contumacy of custom" could influence the Attakapas inhabitants to neglect their fertile lands and their accessibility to outside markets. "Nature has been more than usually beneficient to the Attakapas," said he, adding that the region demanded little from "the hand of art."[27]

According to another observer, the Atchafalaya presented obstacles to navigation which surpassed those of Bayou Plaquemine. It would be several

years before the "short-cut to the Gulf" provided a continuous water access between the Teche country and northern and central Louisiana:

> Bayou Atchafalaya, leaves the river three miles below the mouth of Red River, and enters the gulf near Vermillion /sic/ Bay. It is large, but rendered unnavigable by an immense floating bridge or raft across it, formed by the gradual accumulation of drift wood. It is many leagues in length, and so firm and compact in some places, that cattle and horses are driven over it....The water which descends this channel passes under the bridge, and in many places may be seen winding through small holes and crevices; and at last rushes forth with considerable violence. In times of inundation small boats can pass the bridge by keeping on the flats. Large boats drawn into the vortex of this Bayou, find it difficult to regain the Mississippi.[28]

Not everyone was in agreement with the peculiar properties of the great raft. William Darby, writing around 1815, disputed the veracity of reports that cattle and horses were sometimes driven casually across the river flotsam. He maintained that recurrent movement and reshaping of the floating raft structures made passage difficult if not impossible. In the same breath, Darby acknowledged the growth of "small willows and other aquatic bushes" on the rafts, but he claimed that their maturation was almost always thwarted by the debris' constant shifting and breakage.[29]

Farther downstream, Darby noted the contrasting nature of the cleared portions of the Atchafalaya. He was enchanted by the "many species of... flowers" and funereal drapings of Spanish Moss which decorated the dark forests of cypress and gum. "Even the aligator /sic/," he raptured, "otherwise the most loathsome and disgusting of animated beings, serves to increase the impressive solemnity of the scene."[30] In one of the darker recesses of this forest primeval, the same observer, deeply moved, contemplated the similarity between the swampy environs and the dawn of creation:

> To have an idea of the dead silence, the awful lonesomeness, and dreary aspect of this region, it is necessary to visit the spot. Animated nature is banished; scarce a bird flits along to enliven the scenery. Natural beauty is not wanting, the varied windings, and intricate bendings of the lakes, relieve the sameness, whilst the rich green of the luxuriant growth of forest trees, the long line of woods melting into the distant sky, the multifarious tints of the willow, cotton, and other fluviatic trees, rendered venerable by the long train of waving moss, amuse the fancy. The imagination fleets back towards the birth of nature, when a new creation started from the deep, with all the freshness of mundane youth....[31]

Near the beginning of the nineteenth century, one traveler described the log-choked Atchafalaya as having a width of two hundred yards near its northern junction, with a depth of about 18 feet during the low water period and 33 feet in high water. Thirty miles downstream, the "raft of wood" was said to begin, continuing with frequent interruptions for a distance of 20 miles. Several of the logjams supported a considerable amount of plant and animal life. Willow trees, for instance, could attain a ten-inch diameter as their root systems plunged downward into the matted debris. These rafts were often characterized as "floating bridges," since they often touched opposing banks and rose and fell with the fluctuating waters.[32]

In 1831, Captain Henry Miller Shreve succeeded in clearing the stream of much of its driftage. Gradually the small Atchafalaya, through flood and natural drainage, captured more and more of the Mississippi's flow. During the remainder of the century the Atchafalaya served as an important transportation artery for south central Louisiana and the commercial entrepot of Berwick-Morgan City. But not without cost. By assuming the role of a major stream, the Atchafalaya has since become a threat to the ecology of its surrounding natural semi-wilderness--one of the most unique in the world. Furthermore, its high water marks have continually menaced the safety and security of Morgan City-Berwick, not to mention the smaller population corridors to the north and east. Finally, the Atchafalaya's threat to the traditional course of the Mississippi, itself, has stirred up concern in the established port facilities of Baton Rouge and New Orleans.[33] The future of Morgan City-Berwick will be partly determined by the future role of the Atchafalaya.

Only a small part of the upper riverine borderland was suitable for settlement and cultivation. A few miles of high ground stretched along the left (east) bank of the Atchafalaya below its junction with the Red, and "a few small spots of high land" were found below Bayou de Glaize. During high water, the Atchafalaya's trade connection with the Attakapas country often bypassed the site of Morgan City-Berwick, since short overland connections tied landing points such as Fausse Point on Lake Chetimaches /Grand Lake/ with St. Martinsville, New Iberia, and Franklin.[34] However, traders heading for the lower Atchafalaya region and the extensive farmlands along the Teche frequently circulated their commerce by way of the Morgan City-Berwick site.

It must be emphasized that the Morgan City-Berwick site was merely an underdeveloped ferry crossing when the communities along the middle and upper Teche were the mainstays of the Attakapas agricultural region. As last as 1818, the frontier landing known informally as "Renthrop's ferry" or "Berwick's Bay" marked the western terminus of the wilderness route between the Attakapas region and the Mississippi river.[35]

> The contrast, to the eye of the traveller between the dark and silent gloom in the thick, heavy timbered, inundated lands of Atchafalaya, and the open, light, and cheerful expansion of the wide spread prairas of Opelousas and Attacapas /sic/, produce surprising and

> agreeable emotions. In a route by the mouth of the Teche, into Attacapas, after landing at Renthrop's ferry, the most interesting object which will arrest the attention of the spectator, is the rich borders of the Teche, lined with live oak, black oak, sweet gum and laurel magnolia; the arable margin narrow and nexting down the Atchafalaya five or six miles below the mouth of the Teche....[36]

At mid-century, the Planters' Banner of Franklin considered the feasibility of building a railroad to New Orleans "down the southern bank of the Teche" and through "Rentrope's (point at) Berwick's Bay, thence across the Atchafalaya to Gibbon's point." The low-lying district of what is now Terre Bonne--between the lower Atchafalaya river and Bayou Lafourche--did not offer the direct water transportation linkage which was at least a seasonal factor on the northerly Plaquemine route. There was no continuously navigable stream which flowed between the Lafourche area and Attakapas. Nevertheless, a transportation system was improvized by utilizing the waters of bayous Black and Boeuf, both of which served as a partial connection to Berwick's Bay. In 1815, incidentally, the term "Berwick's Bay" was described as "an unmeaning appellation given to a dilation of the Atchafalaya river, below the mouth of the Teche." It was further noted that "use will most probably perpetuate the name."[38]

Initially, this important subregion of the Bayou Country developed more slowly than the western lands of the Teche due to the more limited land surface available for cultivation, lower elevation, and discontinuous navigation. Still, the smaller bayous acted as penetrating lifelines of antebellum civilization:

> ...Bayou Boeuf, is formed from several streams, that rise east of Lake Palourde, and unite with an outlet of that lake. The margin of bayou Boeuf and bayou Black, is an alluvial soil, of quality equal to any in Louisiana; covered with strong cane, and heavy timber. West of Lafourche and south of Bayou Boeuf, rise a number of small streams, that run nearly south into the gulph of Mexico. The upper parts of Derbane, the grand and Petit Caillou, bayou Peau de Chevreuil, (deer skin) and bayou du Large possess a soil, equal to that on the Boeuf....[39]

Two generations later, a retrospective account of the area underscored the relatively rapid agricultural growth and internal improvements witnessed in the backcountry east of Lake Palourde. Fragments of the old "Attakapas and Barataria Canal" resulted from the first attempts to construct a continuous waterway with Bayou Lafourche "where steamboats regularly ply to and from New Orleans." The route along Bayou Black reportedly cut the distance to New Orleans by one-half, and it was speculated that an improved waterway would "confer a great benefit on this country, and to Attakapas particularly...."[40]

With its source near Thibodaux, Bayou Black snaked its way leisurely westward toward Attakapas. Said to contain cultivable lands "of unsurpassed fertility," the Bayou Black corridor exhibited in 1850 a succession of large sugar cane plantations and prosperous small farms:[41]

> The nearest land route from Attakapas to New Orleans, is by this bayou, and is often traveled. Drovers, with herds of cattle from the prairies, frequent this route. The outlet of this bayou, for navigation purposes, is toward the Attakapas; but should the canal, of which we have spoken, be completed, then there will be a nearer and safer route. There are many planters on these various bayous who are the owners of smaller estates than those we have mentioned, and they are numerous, and add to society the benefit of intelligence with pleasant intercourse....[42]

Just a few decades earlier, there had been "dense forests and dreary solitudes" where wild deer and bear had roamed at will. Now the scene was greatly changed. Small schooners loaded up with "the sweets of the sugar-cane" while the tolling of a steamboat bell indicated an arrival at a plantation wharf.[43] Before the outbreak of the Civil War at the close of the next decade, the Bayou Black water route was to be supplemented and largely supplanted by the New Orleans, Opelousas, and Great Western Railway, an artery of commerce which was to play a crucial role in the development of Berwick's Bay.

One of the earliest and most detailed sketches of social life along the Lower Atchafalaya River was made in 1819 by James Leander Cathcart. Acting as an agent for the United States Navy, Cathcart was evaluating southeast Louisiana's timber reserves for future use in shipbuilding. He began his exploration of the Lower Atchafalaya by first landing his sailing vessel near the home of a squatter family on Tiger Island--the present-day site of Morgan City:

> ...We landed at a white mans house on Tiger Island where LaCoup is from 80 to 100 yards wide, there is likewise a house on Lafourche Isle opposite to it, owned by one Garrett Taylor from Ouachitta--Pierre Moreaux at whose house we landed is a sailor, a native of old France, & is about 60 years old, his wife is a native of Bedford County Pennsylvania, about 33 & has two children the youngest a fine fat boy of a year old, their house is fix'd on a hill of clam shells, which bounds an Indian burial ground, from whence they frequently dig human bones, & once they found a whole skeleton; behind the hill is a piece of good alluvial land; as low as the surface of the water, the soil appears rich & produces red maize, cabbage, garlic, beans, & sweet potatoes--they have some poultry, & what

> I thought a curiosity, their dog which was very tame, eat corn with them in perfect harmony, picking the grain from the cob with his teeth, & generously permitting an old hen to pick up all that fell on the ground--Not so their neighbor Garrett Taylor, who is a single man, & very lazy (as they say) & very frequently comes over to ask for provisions, & if refused mal-treats them & takes what he pleases; once he beat the woman & she thinks that he wishes to make them abandon their little plantation, where they have been settled in solitude these two years, in order that he might take possession of it, & benefit by their industry, for they are all squatters here & have an equal right to the soil; One would imagine that these poor neighbours would find a mutual benefit in living upon good terms with each other; but such a Tyrant is Man! that although the Bayou runs between them, it does not prevent feuds & persecution. Their residence are miserable huts, made of Cypress boards not near so clean, comfortable, or well furnished as the Indian Positions habitation; here we filld our water casks with pretty good water, & they were very civil to us--[44]

Cathcart noted that much of the vegetation covering the natural levees running parallel to the local bayous included a sprinkling of live oak, together with cypress, red oak, and an understory of palmetto, briars, and a coarse grass cover. He complained that the vegetation along Bayou Boeuf on the south side of Tiger Island was badly stunted due to the lowness of terrain and frequency of overflow. Luxuriant growths of wild cane covered much of the soggy environs.[45]

Across the Atchafalaya River, however, Cathcart found the rudiments of civilization to be more substantial. Stopping at the future site of the town of Berwick and at Renthrop's ferry house, he noted the social characteristics of the few settlers and he commented on their peculiar situation. He found the Berwick plantation singularly inviting:

> ...Mr. /Joseph/ Berwick is the son of the man who gave name to the bay, he has five children, who look healthy, he was born on this spot, is unletter'd but civil & intelligent; he presented us with some good oranges fresh from his trees which are the first we have had since we left New Orleans--....
>
> On Mr. Berwicks place are four Indian Mounds, which are a natural curiosity, the origin of which is veil'd by the lapse of time, they are situated at right angles, pointing to the four Cardinal points, including a square of about an Acre, in which about 30 years ago, there were several strata of ashes very visible, supposed to have accumulated from the council fires of the aborigines, who were of the Chetimachaux

> tribe at that period, but who had not the least knowledge, even by tradition of the origin, or even for what purpose those mounds were erected--....
>
> It is worthy of remark that many human bones have been dug up, on Mr. Berwicks plantation, in the vicinity of the mounds, while they have remained undisburb'd, Mr. Berwick seems to have more genius to cultivate cotton, having rais'd last year 150,000 lbs on his plantation, with three Negroes, besides his family & household domestics, than to pry into the curiosities of antiquity, although they have been in his view for more than 30 years;....[46]

Cathcart's description of the Atchafalaya River's Renthrop ferry crossing and depot rounded out the early agricultural setting. From these primitive beginnings, the towns of Berwick and Brashear (Morgan City) gradually asserted their regional commercial preeminence:

> ...Mr. Renthrop & his Son are Taylors natives of Westphalia, come to Philadelphia some years ago, & have traveld through many places in the United States since, & about nine years ago settled upon this spot, they keep a tolerable good table for this part of the world, their beds are clean, provisions wholesome, liquors whiskey, taffia & bad claret, they are obliging but wholy illiterate. Their farm is not very extensive, but their garden is productive, they raise poultry & hogs in abundance, & some fine cattle, & this is the first place we have had milk with our coffee since we left New Orleans; fresh butter is entirely out of the question, & salt cannot be procured except in the City; hogs lard is made its substitute in all culinary purposes, the land everywhere is rich alluvion, capable of producing every necessary of life, & many of the luxuries; but owing to the prevalence of slavery, the whites are lazy, & in general dissipated, & confine themselves to the culture of cotton & sugar alone, because more productive with less labor; The flats (so call'd) used at this Ferry, are form'd of two large canoes, on which is a platform for horses, the price of carriage for a man & horse is 12 dollars, & for black cattle 1.50 cs per head they cross the Lake to the canal which runs into Lake Verrett from Lafourche a distance of 30 miles, & from thence passengers proceed to Donaldsonville, & take passage in Steam boats, that pass either up or down the Mississippi, at the rate of 12½ cts per mile. The flats or double canoes, row with two or more oars, & sail when the wind is fair, the rudder is on one canoe only, the pilot sits on the platform, & steers with a yoke & lines, as he would a gig or wherry--[47]

Cathcart's account underscored the varied ethnic background of the small population located along either side of the Atchafalaya Basin--a characteristic which was to continue down to the present day. The Berwicks, for example, were the direct descendants of Thomas Berwick of Pennsylvania, who was very likely the first white settler in what is today St. Mary Parish. The elder Berwick's son, Joseph, and his widow, Eleanor, had inherited the property in 1797. Subsequently, in 1811, the Berwick heirs reportedly owned about 1600 arpents of land along both the west and east banks of the river. The Tiger Island site along the east bank was afterward acquired by Dr. Walter Brashear, a Maryland physician and descendant of an old and distinguished family of French origin. Brashear had given up a promising medical career in Kentucky so that members of his family might enjoy Louisiana's milder climate. Tuberculosis had invaded the Brashear household earlier. The family first settled on Belle Isle in 1817, but later moved farther north to the site of "Brashear," across the river from the Berwick settlement.[48]

During the next two decades, the Brashear family developed the Tiger Island site into a sugar plantation. Before Dr. Brashear's death in 1860 at the age of 84, the plantation flourished despite the economic doldrums of the early 1840's. As a result of the economic and military hardships of the Civil War, the Brashear family lost their holding and were forced to depart. Small wonder, then, that the settlement's name was changed to "Morgan City" in 1876 when railroad magnate Charles Morgan succeeded in breathing new life into the small entrepot. In the meantime, the area's small population mix had been further compounded by the arrival of Acadians, Slavs, and additional groups of Anglo-Saxons and Latins.[49]

Almost 30 years after Cathcart concluded his timber survey, for the United States Navy, the natural landscape had changed significantly. Broad stretches of sugarcane and cotton fields covered the gentle levee backslopes of the Atchafalaya River and neighboring Bayou Teche. Much of the live oak found in the adjacent forests had been extracted for use in the American Navy and merchant marine. One eye-witness source ruefully criticized a local observation that "there is here enough oak to sustain a fleet for the world." Said the critic in rebuttal: "the recent encroachments on this fine timber have conclusively shown that no treasury is exhaustless, that is sufficiently rich to tempt American cupidity."[50]

Indeed, the celebrated Indian Mounds at Berwick Plantation also disclosed the ravages of human curiosity and disdain. By 1847 only one of the four mounds still maintained an elevation of 30 feet, largely because of its significance as the Berwick family cemetery. The loss was irreparable and especially painful since the skeletons, pottery, and shell fragments were perhaps pre-Attakapas in origin. Berwick's Bay, itself, was described as "a beautiful expansion of water," where the surrounding natural levees rose from five to eight feet above the surface of the water.[51]

To the west, the plantations of the Attakapas Prairie and the cattle ranches of the Opelousas Country provided the Bay with its initial hinterland of raw materials production and a small market for manufactures such as

hardware and dry goods arriving from New Orleans. By the time the Attakapas Canal was completed in 1825, there were 15,000 inhabitants in the Attakapas Country, alone. Navigation of the Teche and the Lower Atchafalaya River was sometimes negotiated by ocean-going brigs towed by steamers. One such brig was the Attakapas. Laden with sugar, the sailing vessel was towed out to sea by the steamer Louisville. Fifteen days later, the Attakapas deposited its cargo in Charleston, South Carolina.[52]

New roads paralleled Bayou Teche and emanated into the back country. Improved navigation during the high water season and the primitive road system were of essential importance in developing the plantation district. In April, 1825, for example, a Captain Curry had successfully maneuvered his steamboat Louisville down the treacherous course of Bayou Plaquemine and up the meandering Teche. The event was hailed as the genesis of a "new era in the history" of the Teche country. The Captain was given a formal dinner in honor of the occasion when he arrived in St. Martinville. Passage by boat was not always a tranquil affair. It is recorded that on March 12, 1825, a keel boat loaded with 53 hogsheads of sugar and a few bales of cotton was sunk in a squall on Grand Lake.[53] More than a generation later, the east-west water route was still a well traveled artery. Only the coming of the railroad eroded its importance:

> The Vesta and Vanleer are now running on the route between Attakapas and New Orleans,--They both are said to be in good condition and well adapted to this trade. They are now able to pass through Plaquemine without difficulty which will enable them to make quick trips to the city. We feel confident that they will prove satisfactory to all that patronize them.[54]

In 1826 the sugar harvest in the Teche district amounted to 3000 hogsheads. Some 57 plantations employed about 640 field hands on more than 1500 acres of sugar-producing land. This was something of a commercial turnabout. Ten years earlier, the production of cane had been almost entirely abandoned due to the high prices commanded by cotton. But a cotton blight, together with "a succession of bad seasons," induced the planters to engage in sugar.[55]

While the Teche plantation district and the western prairie lands of Attakapas specialized in cash crops such as sugar and--to a lesser extent--cotton, the eastern hinterlands of Brashear-Berwick began to develop plantation acreage for the production of sugar. Subsistence crops such as corn, "providence" rice, melon, squash, and bean were also grown by the petit habitants and the slave population. Meanwhile, the Lower Atchafalaya harbor continued in its role as a receiving point for the cattle raised in Texas and the nearby Southwest prairies. The cattle were traditionally driven through Tiger Island on their way to New Orleans.[56]

April 12, 1857 marked the dawn of a new transportation era for Berwick's Bay and the tiny settlement of Brashear. Workmen had completed construction of the eighty-mile long New Orleans, Opelousas, and Great Western Railroad

which tied the Lower Atchafalaya River to the eastern terminus in Algiers, just across the Mississippi River from New Orleans. The "Applesauce," as the railway was called, traversed some of the most difficult swamp terrain in North America as it meandered through the bogs and bayous separating the interior settlements of Lafourche and Des Allemands.[57]

The route was sporadically successful. Goods and passengers going to or coming from Texas could save one day of travel by avoiding the often difficult passage through the Belize and Mississippi River below New Orleans. At the same time, Charles Morgan, a New York businessman who owned the railroad as well as the Southern Steamship Company, could avoid paying the expensive harbor fees at New Orleans. The rail-water route between New Orleans, Galveston, and other Gulf ports provided the Berwick's Bay area with its first major impetus for a promising economic growth.[58] Before the advent of Morgan's Railroad, Berwick's Bay had offered a far more tenuous connection between New Orleans and the Gulf of Mexico.

Temporarily operated by Union troops during most of the Civil War period, the New Orleans, Opelousas, and Great Western Railroad (N.O.O. & G.W.) renewed its contract with Morgan in 1866. Supplementary steamship service between Brashear and Galveston occurred twice-weekly. Within three years, Morgan had become the sole proprietor of the renamed Louisiana and Texas Railroad, which served as the new lifeline of the growing complex of coal yards, cattle stockades, warehouses and wharves lining the Lower Atchafalaya River. Brashear's harbor frontage was 330 feet wide and easily accommodated Morgan's largest steam vessels serving the Louisiana and Texas coastlands. Shortly afterward, Morgan used Chinese and Negro labor to raise the railway's grade and bridgework by two feet, further minimizing the threat of flood. An enlarged wharf system at Brashear was connected to New Orleans by a telegraph line.[59]

In 1872, a new wharf was constructed at Berwick, just across the river from Brashear. In the meantime, Chinese workmen busily extended the railroad west of Brashear. The newly created New Orleans, Mobile & Texas Railroad snaked its way through the Teche country on its way to Vermilionville (Lafayette) and later in the century reached the distant banks of the Sabine River.[60]

Morgan's decision to upgrade the Brashear terminal resulted from his sizable harbor fees repeatedly incurred at New Orleans. As a matter of fact, even the New Orleans press exclaimed that the high cost of conducting business there was perhaps strangling the city's commercial lifelines. Brashear also was relatively free of New Orleans' ravaging yellow fever epidemics and subsequent quarantines, high land costs, and political intrigue.[61] Morgan's economic objectives involving the early growth and development of Brashear are perhaps best related by his biographer, James P. Baughman:*

> ...Thus, the drawbacks of New Orleans as a maritime shipping point and the expense even of maintaining (much less expanding) facilities there conditioned Morgan's

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major decision to increase operations at his Brashear terminal. As a newer, less-urban settlement and one uniquely dependent upon his patronage, Brashear was certainly a more pliable environment. By the mid-1870s, Morgan's wharves stretched over 2,600 feet along the Atchafalaya River and employed some 800 men in the transhipment of goods or in nearby warehouses, cattle pens, coal yards, and marine ways....In 1873, the payroll on the wharves alone was $51,000 per month.

Indeed, Morgan had plans for the Brashear area. On April 22, 1871, he publicly endorsed the Louisiana legislature's charter of the Atchafalaya Bay Company and became its largest stockholder and prime contractor. Authorized to dredge a seaway from the Atchafalaya River to the Gulf, the company began at once. Working day and night, three dredges cut a 100-by 12-foot channel from the river's mouth to the shell reef guarding Atchafalaya Bay....The channel opened on May 4, 1872. Morgan's steamers used it free, while other vessels were charged 25 cents per ton.

Upon completion of the Atchafalaya channel, Morgan discontinued his 'outside' routes (i.e., New Orleans-Texas, via the Mississippi River) and moved all his steamships to Brashear in the final step in a plan to upgrade his route from Louisiana to Texas. Rail-steamer integration substituted rails for ships in entering New Orleans and ships for rails in entering Texas. The most workable solution to the difficulties Morgan had encountered in linking the two areas, it made Brashear the crossroads of his growing enterprises.

Agricultural producers of western Louisiana hailed the expansion of Morgan's interests in Brashear. In return, the steamship operator worked diligently to please. He or his agents frequently visited the parishes along his railroad's route encouraging the construction of branch lines. Interested planters generously donated right-of-way and grading; Morgan reciprocated with spur trackage. the first and longest of these branches was completed over the fifteen miles from Terrebonne (now Schriever) to Houma in 1872.

The railroad also maintained daily connections and through rates with independent steamboats on the waterways it crossed--bayous Lafourche, Terrebonne, Grand Caillou, Petit Caillou, Teche--and often Morgan engineers and road gangs supplied relief or protection work in times of flood. These services and courtesies won friends for the Morgan lines in Louisiana's bayou

> country, and few were surprised when Brashear was renamed Morgan City in February 1876.[62]

In the generation which followed, Morgan's rail and steamship service in southern Louisiana greatly benefited Morgan City and its citizens. Other than an annual mail subsidy and contractual obligations for the movement of Federal troops and stores, the Morgan line remained independent of government aid. And during the entire period of postbellum economic recovery, the only labor disruption occurred in 1875 when six Negro coal leaders objected to being paid in general-store scrip instead of cash. Although the workers were jailed after an altercation with the wharf foreman, their action eventually brought about a change in policy. In the long-run, Morgan's employees were relatively well paid and honestly dealt with. Turnover remained extremely low and job security was insured by the conscientious performance of one's duty.[63]

Mindful of Morgan's Yankee origins, the local press nevertheless issued its finest praise in 1877 for the man whose business acumen had re-vitalized the commerce of the Lower Atchafalaya. A stream of lavish praise was now punctuated with fulsome bribery:

> If Charles Morgan will give us railway connections with Texas by virtue of such legislative encouragement as can be granted him here, we will favor him against Tilden or any other New Yorker as a candidate for the next presidential vacancy.[64]

The all-rail line between New Orleans and Houston was finally completed on September 28, 1880. Two years later, a new bridge across the Atchafalaya River further expedited rail service between the two Gulf Coast cities as it heralded Morgan City's new strategic economic importance.[65]

Several overflows damaged the New Orleans, Opelousas and Great Western Railroad after its construction in 1857. Flooding in 1862, 1865, and 1867 disrupted transportation between Algiers and the Teche country, and in 1874 forced the substitution of steamer service between Brashear and Tigerville. Later on, the railroad grade was elevated by about four feet. Meanwhile, regular steamship service between Brashear and the Texas coast continued between 1857 and 1882.[66] It was during the new railroad age that the physical character of Brashear-Berwick underwent radical change. What had been a sleepy backwater port suddenly became a prosperous little boom town--with all the advantages and disadvantages normally in attendance. Between 1860 and 1875, Brashear's population jumped from a mere 300 to almost 2,000.[67]

During the Civil War years, Brashear and its surrounding countryside had sustained considerable damage due to recurrent warfare by opposing military forces. Confederate control during the first three years of the war was followed by Union occupation between July, 1864, and March, 1865, a Confederate re-capture for two weeks, and finally, Union re-occupation for the duration of the war. Several gunboat battles were fought on

surrounding waterways in addition to the local land battles and skirmishes. During the first Confederate occupation, blockade running sometimes resulted in successful landings in Havana. Both armies constructed temporary military garrisons on both sides of the Atchafalaya River and succeeded in driving out many of the wealthy sugar planters, small farmers, and townspeople due to the repeated upheavals. Significant traces of the economic devastation resulting from the war could be found throughout the area during the remainder of the century.[68]

The Reconstruction Era in the Brashear area was not without incident. Racial discord ran deep when the settlement headquartered a major concentration of black soldiers who were initially a part of the new cultural design. Writing in 1868, one irate Southerner complained of the town's vulnerability to carpetbaggers and freedmen:

> We were informed at Brashear City that the Negroes at Free Town, situated a few hundred yards from Brashear, drill, nightly, and keep up the discipline of a military camp. The military orders and the sound of the drum are within hearing distance of Brashear, and comparatively a small number of white men. This gives the Negroes boldness and effrontery. A few insidious carpet-baggers from the North...are the instiga /tors/ of all this.[69]

But apart from the undercurrent of tension stemming from the black soldier encampment, and the brief labor row of 1875 which involved overtones of racial discimination, there was relatively little to mar the peace along the Lower Atchafalaya. Indeed, there were few communities in the postbellum South which reported so little in the way of actual racial unrest.

In the decade following the War, Brashear experienced its first great leap forward. In 1866, there had been only five stores, two coffee houses, one shoemaker, and one tailor. Considering that the Algiers railroad had been in existence for almost a decade, this was a somewhat modest growth despite the sporadic warfare and military occupation. But by 1875, Brashear had mushroomed in response to Morgan's combined railway and steamship operation. Beside the new custom house and Morgan's wharfage and railway depot stood 50 wholesale and retail stores, 15 coffee houses, five billiard rooms, three bakeries, three drug stores, five restaurants, one hotel, perhaps 12 boarding houses, one ice house, and two newspaper offices. In addition, local manufactures included four steam sawmills; one (Spanish) moss factory; and one sash, door and blind factory. The town's residential area included 800 houses, five churches, five schools, two fire companies, and one Masonic Lodge. Brashear also counted among its citizens one Congressman, one state representative, one parish and one district judge, four doctors, three lawyers, and a collector of customs.[70]

The railroad and steamship baron was alone instrumental in salvaging the destiny of the Lower Atchafalaya port facility. One of the best descriptions of the early boom period of Morgan's station in the swamp was supplied by one eyewitness traveling to New Orleans in the summer of 1870:

> We arrived at Brashear eight long hours before the departure of the /railroad/ cars for New Orleans. This enabled us to examine the improvements which Mr. Morgan is adding to that place....
>
> The new cattle pen is convenient and substantial. It has thirty apartments, capable of holding conveniently fifty head of beeves in each, or fifteen hundred in all. There is a continuous watering trough, running through fifteen of these pens, five hundred feet in length, and a fine double-brake pump connected with it, where seven or eight hundred beeves may drink in a short space of time.
>
> There is a separate and convenient landing for the Teche steamers and cattle. The stock minder's house is on the wharf at the end of the cattle pens. The whole is made with reference to and for the accommodations of the Texas and Teche steamers....
>
> In two weeks the cars will come into the depot on the new track. On this track the whole train will lay by the side of the Teche and Texas steamers, about fifty feet distant from them. The steamers will then receive and discharge freight very conveniently and passengers will have no trouble in passing baggage between the cars and the steamers.
>
> The improvements lately made at this depot are very expensive, and the amount of square timbers and planks used in these improvements is enormous.
>
> Mr. Nelson /supervisor/ informed us that most of the square timber was worked out in the swamps, and on the bayous and lakes, by the Creoles, and by them floated to the depot. These Creoles have received from Mr. Morgan this year about 30,000 dollars. And their work has been well done.
>
> Mr. Nelson has employed much white labor on the wharf and depot improvements....[71]

The reporter also observed that the Brashear harbor was regularly served by salt barge traffic from Petit Anse /Avery/ Island. The barges were towed coastwise from Vermilion Bay to the mouth of the Atchafalaya River. He later described the railroad trip to New Orleans as "elegant and comfortable," since "the springs of these cars.../were/...much superior to those of the old cars.[72]

Across the river, meanwhile, economic recovery was proceeding at snail's pace in Berwick. The western hinterland in the immediate vicinity retained

its agrarian character of ill-kempt sugar plantations and weed-choked byways. The scars of the late War, a depressed economy, and location on the far side of the river were factors which retarded early growth. Cultural continuity in family name, however, was a significant feature of west bank life as late as 1871:

> The Berwick plantation, and the Golden Farm, on Berwick's Bay, are not cultivated. The former place was formerly owned by Joseph Berwick, long since deceased; the latter, by Dr. Walter Brashear.
>
> At Berwicks there is a small ship yard, and a foundry kept up by Mr. Watkins, who understands working iron, brass, and copper as well as the best in this section of the State. There is also a new grocery store here, kept by Mr. Roberts, formerly editor of the Attakapas Register.
>
> Dr. Rhodes works about 30 hands. His is the old Rentrop plantations, at the junction of Berwick's Bay and the Atchafalaya.
>
> Mr. Bradley's place, next above Dr. Rhodes, is worked by Mr. Bradley's three sons. The old sugar house on this place, is in ruins, the brick walks are mostly down, and small trees are growing up through the old machinery which is rust eaten, and ruined....
>
> Mrs. V.H. Rentrop has ten hands on her place, on the west side of the Atchafalaya....[73]

Social life in the early postbellum period of Brashear-Morgan City was not as sedate as it might have been in older established communities in southern Louisiana. The port facility normally attracted a wide variety of ethnic groups and individual characters who were usually transient or seasonally oriented. The sometimes "here today, gone tomorrow" aspect of employment and commercial life was an indicator that profits could be made but momentum sporadic. The community was frontier-like in the extreme, and newspaper items made repeated references to chronic social ills.

To begin with, the town was not renowned for its loveliness. Here are some exemplary quotes in the Attakapas Register cajoling the citizenry to take more pride in the appearance of their community:

> That old building on the foot of Ferret street, known as Loyd's saloon, is being torn down. Let us pray.
>
> A liberal use of paint and white wash will add greatly to the appearance of the city.

> Plant shade trees. We want to have the pleasure of recording the fact that a thousand trees have been planted within the city limits this year. Now is the time to plant them.[74]

Sidewalks in the business section were sometimes made of five-foot planks laid crossways. Meanwhile, the young shade trees were under repeated siege; some townspeople and visitors habitually used the tender plants as hitching posts for their horses. A small minority of city beautifiers, struggling in earnest against the indomitable philistines, had disseminated more than 300 trees along the principal thoroughfares as early as 1875.[75]

In addition, dogs and swine seem to have been a special nuisance in their wanderings about the town. Judging from rueful editorials in the local newspaper, Morgan City was apparently experiencing more than its share of homeless canines and rooting hogs:

> Cut the tails of all the dogs in Morgan City, lay them in a straight line, and it would reach from here to New Iberia. This, too, in our Centennial year, with sausages at two-bits per pound.
>
> The dog crop has increased since pizened sausage came into vogue, and those that were poor and mangy now have a clear thrilling bark, and wag their tails when they see a policeman.[76]

A city ordinance underscored the problem. "No dog, bitch or whelp" was allowed to run at large without a wire muzzle or chain. Dog owners were assessed two dollars for each offense. The town marshall was given authority to destroy any dog running loose. Foraging hogs within the city could be more costly to their owners. If unclaimed within 24 hours the hog in custody could be sold to the highest bidder.[77]

Violence, public drunkenness, and vagrancy were also widespread problems amid the bustle of life in Morgan City. Considering the large population of male transients and roustabouts, "demon rum" flowed freely about the waterfront grog shops and knife fights were given "ho-hum" reportage:

> If you want to take a drink in this city, you can choose out of twenty-two different coffee-houses. That's all.
>
> Sunday evening last Front street was pretty thoroughly populated with drunken men, who were rather too full to wipe off their chins. Five of them were jugged.
>
> Mr. Franciona, who was stabbed in the arm last Friday, is getting along nicely. The person stabbing him was fined twenty five dollars, and placed under peace bond.

> For the past two weeks our town has been pretty well overdone in the line of tramps, who go from house to house begging something to eat. Most of them are large, robust, double-fisted men who ought to have more vim and self-respect....
>
> A quarrel arose between Robt. Cronier and Peter Leonard, on Front Street, last Sunday, and resulted in the latter receiving two cuts, one in the back and one in the side. The wounded man received medical attendance and the wounds were pronounced not dangerous.[78]

One of the most amusing stories reported in the local press involved one inebriated soul whose powerful thirst led to a serious mishap behind the bar. Such goings-on supplied the town wags with the typical ingredients for Morgan City drollery:

> An old swamper named Jones was about two sheets in the wind last Monday, and going into the store of Louis Gougenheim, on Front street, asked for a drink of whisky. This was refused him, and he next asked for a drink of water. There being none in the store Mr. Gougenheim kindly went back to the cistern to get some water for him, and while absent Jones made a raid on the whisky barrel as he supposed. But he missed his mark. In his haste he drew about one pint of coal-oil from an adjoining barrel, and had just swallowed the quantity when the proprietor stepped in. Jones smacked his lips, said it did not taste like whisky. Then he cried; then he laid down on the floor rolled over and over, and said he was going to die. But he didn't die. He was sick, though, and through advice of Mr. Gougenheim he got into his skiff and started for camp, with a pint of coal-oil to light him on his way.[79]

Despite the town's rough edges, the commercial growth of Morgan City was buoyed by a local boosterism that seldom faltered during the 1870's and 80's. Public disorders and local political corruption seemingly had no embarrassing effect on the citizenry. "A new house is commenced about every two weeks," boasted the local newspaper, "and merchants spread out new wares in enlarged buildings with the utmost confidence and pecuniary success.[80] Opportunities were advertised as unlimited:

> ...There is need for people here, and glorious opportunities for small capitalists, so we feel justified in advising them to call here when they conclude to emigrate. Do not forget that we are situated at the termination of a railroad, and the head of steamship and steamboat lines. Come right along, friend, and hang out your sign.[81]

Moo's Restaurant of Morgan City had become a regional favorite among the railroad and steamship passengers, including members of the State Supreme Court who happened to be passing through town. Oysters, a local specialty, sold for as low as "four dollars per thousand at the wharf." The plentiful supply was described as "inexhaustible and of excellent quality," since, in the words of the editor, "the bivalves in this section can be had for the gathering, as they are not bedded by individuals." Proposals were made that Morgan's Railway be used to transport the seafood on a regular basis to the larger New Orleans market.[82]

At the close of the Reconstruction Era, Morgan City's commercial hinterland was one of the richest and most varied along the Gulf Coast. The cultivated lands surrounding Morgan City were largely devoted to sugar cane production. However, the local merchants shared only a fraction of the profits made from the sale and shipment of raw sugar and molasses to distant markets. The New Orleans commercial community managed to dominate more than 85 per cent of the exported volume due to numerous capital investments and continuing planter dependence.[83]

New Orleans also received nearly all of the Spanish moss which first arrived in Morgan City--the primary collecting center. The large amounts of live oak and cypress which were disseminated more widely throughout the country. Navy yards and private shipbuilding facilities from San Francisco to Maine received cargoes of both sawed and dressed lumber. Morgan City became one of the South's leading entrepots of the timber industry. At the same time, trade in cattle, tallow, and hides was said to be "respectable," but apparently conditions were not optimal. Of course, recent railroad construction in the continental interior had managed to re-orient the cattle drives of the Southwest. Cheaper and more direct transportation to the large Northeastern markets helped to deflect trade away from the Gulf Coast.[84]

A varied assortment of other native products were dominated by the larger New Orleans market which often served as a go-between. Locally produced oranges, honey, and beeswax, for example, were first shipped to New Orleans before their removal to the north by rail. Other foodstuffs, such as figs and berries--either raw, dried, or preserved--seem to have had limited commercial value. Like the local river rice, corn, potatoes, and dairy and poultry produce, these items did not yet command any significant export value. Trade in most wild animal products at this time was minimal, except for alligator and pelican products. In 1876, more than 4100 alligator hides sold for 40 cents apiece. Remarkably, only one barrel of alligator oil was extracted for sale and profit. In the case of pelican oil, four barrels were produced:[85]

> This superior oil for machinery sold for 60 cents in the raw and $1.25 per gallon in the refined state.... Thousands of the birds congretate on the Gulf Coast, and their capture in large numbers is easily effected.[86]

Needless to say, the pelican is no longer a familiar sight in the Morgan City environs or anywhere else along Louisiana's coastal region. Another victim of advancing civilization, the pelican is now found within the state's borders only as a result of artificial circumstances.

Early in the nineteenth century, a significant part of Morgan City's trade had consisted of wild game and seafood products. As early as 1819, New Orleans was supplied with fresh fish and turtle brought in by boat from the coastal margins of present-day Terre Bonne Parish.[87] Lack of adequate refrigeration, however, greatly restricted the radius of trade and quantity of catch. The ice house was an important oasis of preservation and comfort during all the seasons of the year. Louisiana's humid subtropical climate was first held at bay by blocks of New England ice before mechanical refrigeration became a common fixture in Morgan City and in the railroad cars and steamship reefers which served the port:

> The Schooner "Grace Vandosen" is expected in a few days loaded with 500 tons of ice at Belfast, Maine, consigned to Mr. A. Ehrman. This will be the second cargo this winter, and we are pleased to know that ice will be plentiful next summer.[88]

The surrounding marshland provided abundant wild fowl as well as marine life. One newspaper report in 1878 noted that "There is a little sloop running regularly between here and Chenier Tigue /Chenier au Tigre/ bringing into market wild game, principally brant, or wild geese." They were described as "cleaned, fat, and ready for the oven, at reasonable prices."[89]

By 1898, Morgan City was regionally renowned for its oyster, fish, shrimp, and crab trade. One of the largest processors was the Berwick Bay Fish and Oyster Co., Inc. The production and sale of fresh-water finfish, incidentally, has subsided in recent years due to pollution, agricultural pesticides, wildly fluctuating temperatures, and scarcity of oxygen. Today, the production of jumbo shrimp and crabmeat continue to be important. And while commercial fur trapping in the area was relatively inactive during the nineteenth century, it experienced impressive growth during the first half of the present century.[90]

Morgan City's jumbo shrimp business allegedly experienced a difficult birth. While Southern states along the eastern seaboard had exploited the jumbo for years, Louisiana by 1933 had not developed a similar market. This condition changed during the following year when Captain Ted Anderson, a Scandinavian mariner, bypassed the traditional shallows and sailed far out into the Gulf. Returning to Morgan City with almost 50 barrels of splendid jumbo shrimp, Capt. Anderson first encountered resistance among pop-eyed dealers. The general conclusion among some of the buyers was that something was amiss with "them shrimp swole up like that." At any rate, the Scandinavian intruder and innovator did manage to dispose of his catch in Berwick, and thus began Louisiana's modern-day "shrimp revolution."[91]

Steamship operations in Morgan City reached their peak in the decade preceding the completion of the Louisiana and Texas Railroad. The telegraph operator on Shell Island regularly notified the port town whenever a vessel arrived at the mouth of Atchafalaya Bay. Western Union provided the information and time needed to make ready for cargo discharge and re-loading. Coastwise steamers tied Morgan City to the Texas ports of Galveston, Corpus Christi, Rockport, and Indianola. Along inland waterways during the high water season, daily packets carrying freight and passengers ascended Bayou Teche for New Iberia and St. Martinville; weekly packets headed upstream on Bayou Vermilion for Abbeville, and Vermilionville. Even the treacherous Upper Atchafalaya was sometimes navigable for small packets.[92]

Both the railroad traffic and that of the River continued to sustain the region's commercial vitality during the last quarter of the nineteenth century. As early as 1878, a daily passenger train arriving from New Orleans contained as many as 400 riders.[93] Following Morgan's death, the Atchafalaya River's 12 to 14-foot channel was rather casually maintained by both private and public interests. After years of sedimentary build-up, re-dredging was financed in 1907, which accommodated "30 vessels in coastwise trade and 18 vessels from foreign ports." Following another 30 years of almost total neglect, the silt-laden channel was once more deepened to at least 10 feet as a result of the burgeoning jumbo shrimp industry and its need for improved access to the Gulf. Today, the Louisiana Intracoastal Seaway Association (LISA), organized in 1958, is a primary force in helping to maintain minimal navigational requirements in the Lower Atchafalaya River and neighboring waterways.[94]

The town of Berwick--perhaps the oldest European settlement in St. Mary Parish--grew very slowly during the one hundred year period following Joseph Berwick's birth in 1779 at the site of that village. By 1876, the community counted only 300 souls while Morgan City loomed as a "metropolis" of perhaps 2000 inhabitants (It should be remembered that just before the outbreak of the Civil War, the population of Morgan City /Brashear/ had been as low as 300). Berwick's major industry at this time centered around its substantial shipyard and dock, and the resident shipwrights and their apprenticed sons contributed heavily to the water-borne commerce of the Atchafalaya Basin and adjacent coastal marsh region.[95]

By the close of the nineteenth century, however, Berwick also boasted one lumber company, one general merchandise store, two grocery stores, one shoe store, one carpenter works, one blacksmith shop, and two saloons. One individual acted as notary public while another served as justice of the peace. The local doctor also served as druggist and postmaster. The town was incorporated in 1907.[96]

By mid-century Berwick had experienced phenomenal growth. Its four-mile waterfront with its 90-foot deep channel, accommodated the interests of local shrimping fleets, seafood packing plants with ties all over the world, boat-building and shipyard maintenance operations, marine equipment production facilities for an infant offshore petroleum industry, and an oyster shell products company.[97] The only industry to experience a complete shutdown was

the sawmilling of cypress--an enterprise which quite naturally dissolved when commercial cypress disappeared around 1925.[98]

The importance of food-processing facilities in Morgan City-Berwick is underscored by the large numbers of unskilled workers locally employed. It is noteworthy that food-processing is still Louisiana's number one industry in terms of numbers of employees. The average petroleum worker generally maintains a higher standard of living, but he is frequently outnumbered by the food factory worker (many of whom are females). The latter group is perhaps more dependent on the local payroll due to a greater reluctance to break family ties and move away in search of better pay.[99]

Morgan City, meanwhile, has remained the keystone municipality of the Lower Atchafalaya Basin. The relative stability of the community was indicated as early as 1876 when the varied religious character of the inhabitants expressed itself in wood and brick. One Roman Catholic Church (1868) and one Jewish Synagogue (1875) had been constructed. Presbyterians, Methodists (North), Baptists (black), and other Protestants also worshipped in regular services at their respective churches. Morgan City also boasted two public schools (open six months of the year), one Catholic parochial school, the Morgan City Academy, and two private girls' schools.[100]

While Charles Morgan was responsible for Berwick Bay's first major economic revolution by virtue of the convergence of his celebrated transportation lines, the discovery of offshore petroleum could be characterized later as the area's second major economic revolution. On November 17, 1947, Kerr-McGee Oil Industries was successful in Ship Shoal Field, Block 32, and several major oil companies followed suit. Morgan City became an important base for operations along the coastal shelf, and thus the "cradle" of technology's experimental venture into offshore petroleum extraction. This second revolution was to become an even greater instrument of environmental and economic change than was the first.[101]

FOOTNOTES

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