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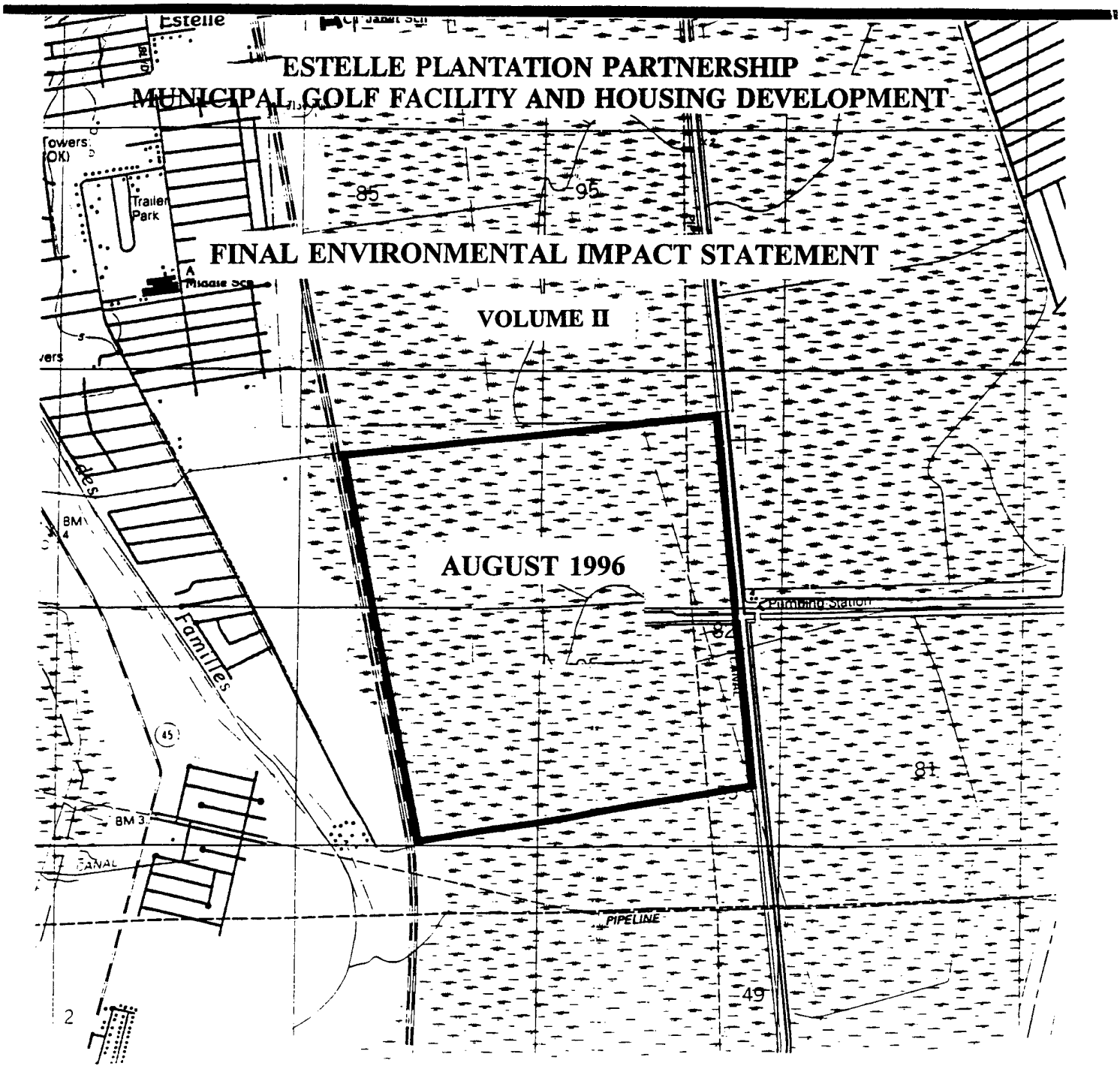

ESTELLE PLANTATION PARTNERSHIP
MUNICIPAL GOLF FACILITY AND HOUSING DEVELOPMENT

FINAL ENVIRONMENTAL IMPACT STATEMENT

VOLUME II

AUGUST 1996

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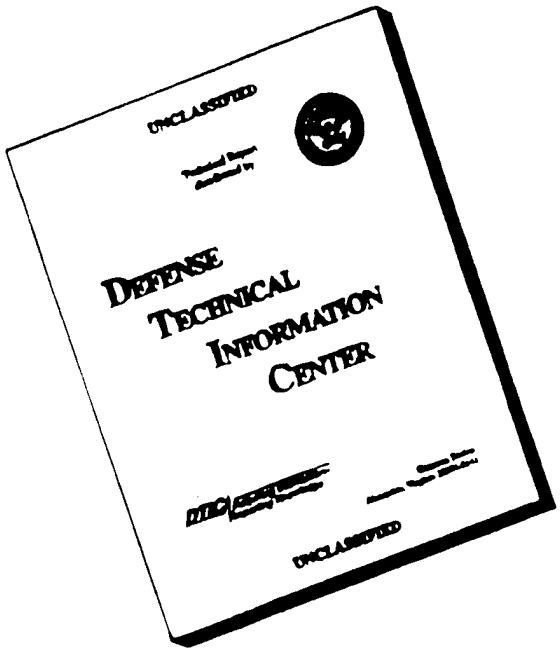

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ESTELLE PLANTATION PARTNERSHIP
MUNICIPAL GOLF FACILITY AND HOUSING DEVELOPMENT

FINAL ENVIRONMENTAL IMPACT STATEMENT

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CASHIO, COCHRAN, TORRE/
DESIGN
CONSORTIUM, LTD
A PROFESSIONAL CORPORATION

March, 1992

The Jefferson Parish Council and Parish President
1221 Elmwood Park Boulevard
Harahan, Louisiana 70123

Dear Councilmen and Mr. Yenni:

We are pleased to submit the Jefferson Parish Municipal Golf Course Feasibility Study to the Parish Administration and Council for your consideration and further action. It is the result of extensive research and detailed analysis by the firms of Design Consortium, Ltd., Golf Resource Associates and P.B. Dye, Inc. We are each national leaders in our respective fields of recreational planning, golf market analysis and golf course design/construction.

This study identifies the significant role that golf and the golf industry has in the national business of recreation. It also presents a concept whereby Jefferson Parish can become part of this highly successful national trend.

In particular, a detailed market analysis indicates that the market for this type of project exists. It identifies the various costs and other elements involved in developing such a facility. Further it shows that it could be a successful and profitable recreational asset for Jefferson Parish.

Equally important, if developed along the lines of the concept presented, the project would be a significant economic development stimuli that would be a visitor/tourist magnet. Other states and communities are aggressively pursuing quality public golf facilities as successful tourist attractions, while offering top quality golf recreation to its residents.

Jefferson Parish has the opportunity to develop a most significant recreational and economic development asset for now and future generations. The project could effectively provide a new quality recreation facility, while simultaneously producing a new source of revenue.

Thank you for allowing us to be part of such a significant project. We look forward to the opportunity of assisting you further in bringing this concept to reality.

Cordially,
Cashio, Cochran, Torre/Design Consortium, Ltd.

Louis A. Savoye, Jr., AIA

LANDSCAPE ARCHITECTURE • ARCHITECTURE • URBAN DESIGN
INTERIOR DESIGN • ENVIRONMENTAL PLANNING
MEMBER • ASLA, AIA, APA
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Executive Summary

The Jefferson Parish Municipal Golf Course Feasibility Study assesses the feasibility of developing a championship quality, regulation play 18-hole municipal golf course in Jefferson Parish, Louisiana. The study evaluates the market potential of golf in the Jefferson Parish market area, and details in the proforma the costs of design and construction of the golf course by P.B. Dye, a known design/build golf course architect. The financial feasibility is determined by the net operating income where the municipal golf course can be operated with minimum financial exposure to the Parish of Jefferson.

Around the country, golf is big business, one that annually pumps $20 billion dollars into the national economy according to the National Golf Foundation, a non-profit organization dedicated to the advancement of the game. New golf course projects, whether public or private, have had difficulty keeping pace with the growing number of players. In the past 10 years, golfers increased from 14.6 million to 24.7 million, or 69%, while the number of courses increased by 1,040, or 8%.

What has retarded the growth of the game of golf in Jefferson Parish is the lack of publicly accessible golf courses. Currently there are no public golf courses in Jefferson Parish to serve the nearly half million population.

The purpose of building a municipal 18-hole golf course in Jefferson Parish is two fold. 1) To serve the Jefferson Parish public golfer who currently must compete for playing time on the public courses provided in neighboring Orleans Parish. 2) To serve as an economic development tool for Jefferson Parish by a) Serving as a catalyst and accelerating development of one of the last easily developed land areas into commerce resulting in new revenues for the Parish, and b) by developing a quality golf course designed to attract the vacationing and tourist golfer. Golfers utilize "golf packages" at record levels to other communities nationwide as well as to those communities as nearby as the Mississippi Gulf Coast where "Golf is big business".

Project Concept

Key elements in the project concept involve:

(a) the Parish as the facilitator or generator of the concept,
(b) a private land donor who would provide a project site
(c) design of the golf course by a nationally recognized design/build golf course company,
(d) a golf course management entity and
(e) financing via public and/or private sources.

Market Demand/Market Mix

Review and evaluation of the demographic and socioeconomic characteristics of the resident population within the market area for the proposed Jefferson Parish golf facility revealed that an estimated 6 percent of those residents who are five years of age or older can be considered as potential golf participants.

Public Golfers

It is estimated that the proposed facility's defined market area potentially contains nearly 60,000 resident golf participants and that approximately 30,000 of these golf participants would normally prefer to participate in the game at a public golf facility. It is further estimates that, by 1995, the number of public golfers in the market area will approximate 29,000. This will generate approximately 540,000 annual rounds of play.

Private Crossover Golfers

Research also indicates that public facilities will receive some play from private golf participants. It is estimated that these "crossover" golf participants will contribute approximately 34,000 annual rounds of play to the projected market demand potential. This projection should increase with the availability of top quality public golf facilities at reasonable fees.

Visitor/Tourist Golfers

Given the presence of a national visitor/tourist population in the greater New Orleans area that reportedly exceeds 6 million, it can reasonably be estimated that nearly 135,000 additional golfers could be visiting the Jefferson Parish market area on an annual basis. If 50 percent of these potential golfers were to play one round of golf during their stay in the area, approximately 70,000 additional rounds of play could be added to the overall unserved market demand potential.

In total, it is estimated that by the year 1995 the combined resident public golf facility users, crossover private golfers, and visitor/tourist golfers could generate approximately 640,000 annual rounds of play.

Unserved Market Demand

It is estimated, on the basis of the potential demand which could be created by the market area's resident and visitor golf population less the level of demand that is accommodated by the market area's existing public golf facilities, that the current and projected unserved demand potential is approximately 120,000 annual rounds of play. It would require two or three additional public golf courses to accommodate this unserved market.

Jefferson Parish Municipal Golf Course

The Jefferson Parish Municipal Golf Course proposed in this study is a championship quality, regulation play, eighteen (18) hole golf course developed on a minimum 175 acre site and accommodates the design requirements of a top quality golf facility. This site size is a prerequisite of this project concept. It is proposed that the facility be designed and built by a known name in golf design, P.B. Dye of P.B. Dye, Inc. The project would include the golf course, practice range, a combination club house/pro shop/cart storage building, maintenance facilities, parking and other normally required elements.

The total estimated initial project cost of $5,678,047 is based on the following cost breakdown:

(a)	Golf Course Construction	$3,090,794	
(b)	Golf Course Design Fee	$335,000	
(c)	Legal and Administrative Fees	$225,000	
(d)	Maintenance Building	$332,500	
(e)	Road and Utilities	$625,000	
(f)	Golf Cart Storage Building	$270,000	
(g)	Temporary Pro Shop	$50,000	
(h)	Parking Lot and Drives	$132,000	
(i)	Design Fees for e,f,g,h	$107,700	
(j)	Golf Course Equipment	$239,670	
(k)	Contingency @ 5%	$270,383	
	Estimated Initial Project Costs		$5,678,047
(l)	Permanent Club House/Pro Shop	$649,000	
	Total Estimated Project Costs		$6,327,047

The above summation of total project cost assumes the donated land concept. With the donated land approach, a consideration should be given to off setting road and utility costs with lot sale rebates to Jefferson Parish, or utilize these funds for increased debt service.

Financial Feasibility

The Jefferson Parish Municipal Golf Course is projected to support 30,000 - 35,000 rounds of golf in its opening year and to reach maximum play of 50,000 rounds in ten (10) years. Initial green fees would average $20.00 - $25.00 dollars. Priority will be

given to local golfers, with "out of towner" green fees 10-20% higher.

A proforma of income and expenses was forecast over a ten year period and assumes a 20 year debt amortization period. The proforma clearly shows the facility will become self supporting by the third year and profitable by year five. Note that this proforma assumes that the golf course would be constructed on land donated to Jefferson Parish. If the provision of the lot rebate concept were integrated into the pro forma, cash flow would increase and debt retirement and/or profit would improve.

Marketing Program/Economic Development

With the implementation of an aggressive marketing plan, one that emphasizes individual and group outing play from conventioneers and tourist, it can be anticipated that at least 25 percent of play at the proposed Jefferson Parish golf facility could be derived from the visitor/tourist segment of the golf market.

In addition to attracting golfers from the strong visitor/tourist market, the marketing program would specifically target the national vacationing golfer. The proforma allocates $50,000 annually for the first and second years of advertising/marketing, then is reduced 5% per year as the facility's recognition and use increases. Essential to the success of the marketing program is a top rated signature golf facility that the national golfer has come to expect.

INTRODUCTION

This report is an investigative study conducted to determine the feasibility of developing a champion quality, regulation play 18-hole municipal golf course in Jefferson Parish, Louisiana. The study evaluates the market potential of golf in the Jefferson Parish market area, the availability of land suitable in size and topography to the development of a quality golf course facility, and details in the pro forma the costs of design and construction of the golf course by P. B. Dye, a known design/build golf course architect. The financial feasibility is determined by the net operating income where the municipal golf course can be operated with minimum financial exposure to the Parish of Jefferson.

Background-The Golf Industry

Around the country, Golf is big business, one that annually pumps $20 billion dollars into the national economy according to the National Golf Foundation, a non-profit organization dedicated to the advancement of the game. New golf course projects, whether public or private, have had difficulty keeping pace with the growing number of players. In the past 10 years, golfers increased from 14.6 million to 24.7 million, or 69%, while the number of courses increased by 1,040, or 8%.

The National Golf Foundation predicts that one new golf course per day until the year 2000 is required just to keep pace. And nowhere is the potential for development greater than in the South, which has the fewest golf holes per capita of any region in the country and where the weather is suited to year round play.

The American Society of Golf Course Architects, realizing the paucity of good municipal courses, is encouraging village, county, park district and state officials to consider the construction of daily fee courses when economically feasible.

As a rule, a municipal course can mean an economic boost to a community. Few municipal course operators dispute the benefits of these projects, but many are surprised at the profits a municipal golf course can yield. Some public courses in the Southeast and Western regions of the United States produce annual net profits in excess of $300,000. The profits parlay into a positive economic influence on a community, creating jobs at various levels and attracting new business and industry.

Comparable Golf Development

Before one dismisses the optimistic forecast of the National Golf Foundation, consider an ambitious public golf course construction project announced in our neighboring state of Alabama. Four (4) golf complexes are planned with 54 holes at two sites and 36 holes at the other two sites, designed by a name golf course designer and including a lighted par-3 course for evening play. Green fees are in the $20-$25 range. The courses can be walked, the ecology, the environment, and reduced pesticide and herbicide use

are some of the project's primary objectives.
The 180 holes are planned to open in less than a year. Various corporations and cities in effect have donated the land at no cost. These will be daily fee public courses financed by Retirement Systems of Alabama which is in the business of investing pension funds for the State of Alabama. The courses are developed as stand alone profit making ventures and viewed as providing an economic impact for the towns and cities where they are located.

A 1990 National Golf Foundation report shows the state of Alabama ranking 43rd in "golf accessibility," which is simply population per 18 holes of publicly accessible golf. Louisiana ranks 46th. "We're way behind in public courses," agrees Buford McCarty, executive director of the Alabama Golf Association. He says that as each new public course is opened, golfers seem to fill it to its 60,000 rounds per year capacity. None of the older facilities have experienced any falling off as new courses open. So the golfers are there !

The multi-course project isn't only for Alabama golfers, but has the golfing tourist and vacationing golfer in mind, as well as a lure for retirees. Research has shown that people visit three times on the average before moving to a place to retire. The multi course golf project will increase the visitation of this potentially lucrative group of people.

If you have a group of great golf courses, then they can be promoted to tourists as a golf mecca. All the courses are within five to 15 miles of an interstate. Alabama has always been a pass through state to Florida. Florida courses that are the destination of the travelers are costly, compared to the projected green fees in Alabama. According to the director of the Bureau of Tourism and Travel, "Alabama has a tremendous climate; its an ideal state for golf. The courses will be first class, and you can never have too many golf courses".

Jefferson Parish-Municipal Golf

While golf has been played in the United States for more than a century, much of that time the game of golf has retained an exclusivity that has retarded its growth. That is, until the advent of the municipal golf course. The arrival of a public, daily-fee golf course put the game within the reach of the general public, commencing a period of sustained growth. This statement from the National Golf Foundation "Municipal Golf Courses Make Dollars and Sense" sums up the plight of the game of golf in Jefferson Parish and the New Orleans metropolitan area.

Until the economic downturn in the Oil and Gas Industry forced a number of golf courses to operate as Daily Fee Courses, the access to the game of golf was almost

exclusively through membership in area country clubs. The public golfer played the municipal courses at City Park, Audubon Park, Bartholomew and Brechtel in Orleans Parish. Jefferson Parish has no municipal golf courses nor does any other parish in the region. This exclusivity has retarded the growth of golf in this area, and according to local golf professionals has severely limited the play to juniors and women, the two high growth areas in national golf statistics.

To stimulate the growth of golf more municipal courses are needed. The construction of a municipal course is considered practical as long as there are 25,000 to 30,000 people in a given area not served by a daily fee facility, according to the market research of the National Golf Foundation. Jefferson Parish with its population base of approximately 500,000 people has one (1) Daily Fee golf course at Bayou Barriere in Belle Chasse and a Daily Fee course at Plantation in the incorporated municipality of Gretna located in Jefferson Parish.

A municipal facility is open to everyone and generates its own participation by expanding the player base to appeal to a wider spectrum of the general population. It encourages the first time golfer, who can pay as he goes and not have to incur the expense of club membership. It is essential to the future of the game of golf in the New Orleans Metropolitan area that access to public facilities become more commonly available. Today the golf courses are competing for the same player without expanding the player base.

Properly developed and managed, municipal golf courses have proven to be profitable enterprises for the municipalities and have generated recreation dollars for future golf course expansions and other recreational needs. It has long been noted that revenues generated by Golf at City Park supports the overall maintenance of the park.

Louisiana ranks 31st among states with 221,000 golfers, but in the percentage of the population participating in the sport, the state ranks 46th. Only 5.4 percent of Louisiana's inhabitants played a round of golf in 1989. Paradoxically, the solution is to build more municipal golf courses and increase the public access to golf facilities.

The future of golf is in attracting the first time golfer, the female golfer and the junior golfer to the game. According to NGF statistics these are many times one and the same. There are an estimated 5.4 million female golfers representing 21.8 percent of the U. S. golfing population. In 1989, 40.2 percent of beginning golfers were female. Females constitute a much larger percentage of beginning golfers than of the entire golfing population. Among female golfers 78 percent are public golfers, those who play 50 percent or more of their rounds at public golf facilities. Female golfers average 15.5 rounds annually.

There are an estimated 2 million junior golfers representing 8 percent of the U. S. golfing population. Males are dominant in junior golf, accounting for 81.8 percent of the junior golfer population. An overwhelming majority of junior golfers (81.6%) play 50 percent or more of their rounds at a public golf facility. Junior golfers play an average of 13 rounds annually.

The public course at City Park in Orleans Parish has a program which enrolled 500 Junior Golfers. The majority of the junior golfers reside in Jefferson Parish.

Purpose

The purpose of building a municipal 18-hole golf course in Jefferson Parish is two fold.

1) To serve the Jefferson Parish public golfer who currently must compete for playing time on the public courses provided in neighboring Orleans Parish. The seven (7) municipal golf courses plus four (4) daily fee facilities provide a total of eleven (11) public golf courses in St. Bernard, Plaquemines and Orleans Parishes to support public golf for the entire region. Currently there are no municipal golf courses in Jefferson Parish to serve its nearly half million (500,000) population base. 2) To serve as an economic development tool for Jefferson Parish by a) serving as a catalyst and accelerating development of one of the last easily developed land areas into commerce, resulting in new revenues for he Parish, and b) by developing a quality golf course designed to attract the vacationing and tourist golfer.

Local Public Golfer

The prospective users of the Jefferson Parish Municipal Golf Course are the local public golfer, residents of Jefferson Parish and those region wide to include Orleans Parish, St. Bernard Parish, St. Charles Parish and Plaquemines Parish drawing from a population base of 1,050,000 people. Users are men, women, and junior golfers.

Vacationing Golfer

To augment the local golfer, is the vacationing and visitor / tourist golfer. The vacation golfer are those golfers who specifically utilize golf packages or travel to play golf. An example is the Mississippi Gulf Coast where from January to May, midwestern and Canadian golfers frustrated with snow covered courses at home come to play golf. Promoted as "the South's affordable golf resort", the Mississippi Gulf Coast has fourteen (14) daily fee and public golf courses and year round golf vacation packages where golfers can choose from very basic offerings of room and green fees to luxury packages with all the amenities.

As far as this study can determine the vacationing golfer is an unknown quantity in the tourist industry of Jefferson Parish and the metropolitan area. Although the region sports over thirty (30) golf courses and nearly year round playing weather, no attempt has been made to promote and market New Orleans as a golf vacation destination.

Tourist Golfer

The visitor/tourist golfers are those who come to the New Orleans Area on conventions, business meetings, and other business and play golf as a secondary activity. The tourist golfer is an essential ingredient in the business of golf in New Orleans today, as private courses allow for the " out of towner" to play while restricting play to the local golfer

who can play by invitation or membership only. New Orleans area golf course managers acknowledge the contribution made by the visitor/tourist golfer to the overall viability of local private country clubs.

Study Approach and Methodology

To develop the concept of constructing by national standards a quality golf facility for use by the public golfer of Jefferson Parish but which would also appeal to the vacationing and tourist golfer, a team of professionals with expertise in the area of recreation planning, golf course design and golf market feasibility was assembled. For only one of the above listed professional disciplines to have undertaken this study would not have provided the comprehensive approach and results that this study has, thus rendering more credibility to the findings and recommendations.

The Study Team

Design Consortium, Ltd., are specialists in the design and planning of recreational facilities nationwide, and is the lead firm for this study with the responsibility of coordinating the efforts of P.B. Dye and Dye Golf, Inc., a well known golf course architect and design/build firm with direct and recent experience in the design and construction of public golf facilities, and Golf Resource Associates (GRA) a national firm specializing in Golf Market Evaluation.

Design Consortium, Ltd.

Cashio, Cochran, Torre/DESIGN CONSORTIUM, LTD., one of the largest landscape, architectural and planning firms in the Gulf South, has provided a variety of professional services for government agencies, industry, public and private institutions, and individuals since its founding in 1968. The firm has planned, designed and built projects throughout the United States and offers a complete range of planning, design and management services. Because of the diversity of their project experiences, they have the capacity to address complicated issues, coordinate the efforts of other design consultants, and manage the overall conduct of large-scale projects. Design Consortium represents 20 full-time professionals who have been personally involved with projects similar to the one being addressed in this study. In recent years, the firm has focused its activities on recreational/waterfront planning and design, urban design, zoological and environmental planning.

In Jacksonville, Florida, Design Consortium completed design and planning of the waterfront development on the St. John's River. Their conceptual plans and illustrations were successful in presenting development potential to the City Council, business interest, investors and general public. By clearly showing the proposed development as it fit into the existing site they were able to generate widespread support for the project. This translated into municipal funding, private investment and public enthusiasm for the development ingredients essential to the construction of any project. Construction on this $6 million project was completed in 1988. The Southbank Riverwalk project is a 1989 ASLA Merit Award Winner.

For the State of Louisiana, the firm has completed the Bayou Segnette State Park, Jefferson Parish ($9.0 million on construction cost). Included in this project are a park center complex, overnight camping facilities, cabins, and a 300-acre day-use area.

A comprehensive recreation master plan was prepared by Design Consortium for Jefferson Parish. This study proposed a creative and diverse plan for maximizing the recreation opportunities that exist in the Parish. This plan represents the imaginative and effective planning abilities required to produce such studies.

Projects like Bayou Segnette Park and Recreation Master Planning Jefferson Parish, Southbank Riverwalk in Jacksonville, Florida, and Mississippi Gulf Cost study all represent complex planning studies which interweave diverse elements into a thread of common benefit and interest in pursuit of what are the intrinsic environmental values of those communities. These project planning abilities are also provided by Design Consortium in this feasibility study.

P.B. Dye, Inc.

P.B. Dye, Inc., is a golf course design/build firm headed by P.B. Dye, son of legendary golf course designer Pete Dye. Since 1981, P.B. has had a hand in the design of about two dozen golf courses. Three of these golf courses are on the current list of top 100 golf courses in the United States, according to Golf Digest and Golf Magazine. In particular, P.B. Dye, Inc. has experience in the design/build of public golf courses. Northwoods Golf Club of Columbia, South Carolina, completed in 1990, is an example of a P. B. Dye public facility designed with private club amenities. According to the Northwoods owners, "the Dye name is marketing magic, let P. B. build it and the players will come".

Given the natural ecology and drained wetlands topography of most undeveloped sites in Jefferson Parish, P.B. Dye has extensive experience in designing and building golf courses on sites where conservation and protection of wetlands are top priority. A Dye design works with the natural terrain and vegetation of the site, utilizing drainage techniques indigenous to the New Orleans area.

Carving Dye's vision into the earth are no mere bulldozer operators, but college graduates who have studied agronomy, turf grass management and other applied sciences. P. B. Dye, Inc. is a design build firm with hands on experience in the actual construction of the courses they design.

Based on an on-site visit to undeveloped areas of Jefferson Parish where P. B. could see first hand the site conditions, soils and natural vegetation of vacant land available for

development, P. B. has personally designed the Routing Plan for this study. Design Consortium complimented the Dye routing plan with conceptual enhancement of the golf course features.

With P.B. Dye's current and active participation in the design, construction and operation of several quality new public golf facilities, the Dye organization was the source of much of the cost, construction and proforma data utilized in the preparation of this study.

Golf Research Associates GRA

Golf Research Associates is a golf facility development and operations consulting firm with nationwide experience and expertise in all aspects of the planning, development, operations and marketing of public and private golf facilities.

In the context of this feasibility study, GRA conducted the Golf Market Evaluation of the Jefferson Parish Market Area, which is an in-depth market demand analysis containing all the essential elements necessary to provide an assessment of the market potential of the proposed municipal golf facility.

The Golf Market Evaluation reviews and evaluates key demographic and facility operating characteristics within a carefully defined market area, and provides projections relating to the total market demand potential and unserved market demand as related to the need for the proposed facility.

Project Concept

Research and investigation into the feasibility of developing the Jefferson Parish Municipal Golf Course indicates that the project may require the joint effort of public and private participation to be feasible. Key elements in this concept involve (a) the Parish as the facilitator or generator of the concept, (b) a private land donor who would receive the benefits of substantial increased value of residual adjacent real estate, (c) the participation of a design/build golf course company, (d) a golf course management entity and (e) financing via public or private sources.

Land Donation

Given the history of golf course development in Jefferson Parish and nationally, golf courses have been the mainstay of residential land development. Today, golf courses generally are built to sell real estate. The appeal of the golf course makes residential land sites more attractive, more valuable and more saleable.

With the advent of the conference center and corporate meeting and convention facility, other compatible commercial uses which benefit from proximity to a golf course have emerged. The golf course designed as part of the commercial development gives the commercial land developer a competitive edge.

Even more today, developers are willing to donate the land and certain improvements for the development of a golf course for the benefit of the increase in the value of the residual land. Depending on the per square foot value of the vacant undeveloped land this can be a considerable contribution to the economic feasibility of the municipal golf course project. This study includes the premise of donated land.

Role of the Parish/Municipality

Jefferson Parish would serve as the facilitator of the design,construction, maintenance and operation of a public golf course. The developer would donate the land to the Parish or to a representative of the Parish.

The Parish would act as the facilitator between the residential/commercial land developer and the Design Build Golf Course Architect and would operate the golf facility on a contractual basis with a golf course management company based upon an agreed upon pro forma of fees and operating revenue and expenses.

Economic feasibility then is the ability of the municipal golf course to generate fees and income sufficient to meet the operating expenses and debt service, and operate at break even or at minimum cost to the Parish.

Quality Golf Course Design P. B. Dye, Designer

The concept for this project has been to design and build a quality golf course by a golf course designer of the known caliber and success of P.B. Dye. P.B. has determined that a minimum of 175 acres of land is required for the construction of a quality course which can compete with the courses being developed around the country.

The golfer today is more sophisticated and to market a municipal golf facility to attract the vacationing golfer and to garner a share of the tourist golfer, a quality golf course built on a minimum of 175 acres of land is a prerequisite to the overall feasibility of the project.

It is reasonable to assume, given the economic downturn of recent years that there are or may be golf courses for sale in Jefferson Parish for conversion to a municipal daily fee operation. However the available courses were built on 100 to 110 acre sites.

So tight is the available land that the design options to redesign these courses are limited. The overall economic feasibility of the project depends on the tourist magnet. A minimum of 175 acres is needed to design or redesign a course to achieve today's quality ranking.

Financing

Two of the most common approaches to financing municipal golf courses are through recreation revenue bonds and general obligation bonds. The municipality finances the design and construction of the golf course, and retires the bonds from the operating revenue of the golf facility. Net operating income is profit to the Parish and can be used to finance an expansion of the 18 hole golf course and/or used to finance other recreational projects.

Another avenue for financing is the Lease Contract where the municipality receives the donation of the land and leases the land on a long term lease arrangement to the Design/Build party who constructs the facility and finances the project from private lenders. The debt service on the construction loan is paid from the proceeds of the facility and is considered on the proforma as an operating expense. Net operating income is profit to Parish and the golf course developer who operates the facility as a daily fee public golf course based on a proforma of fees and expenses negotiated with

the Parish.

Other financing options may be available to the Parish. If other finance options are pursued, it must be remembered that this study is based on constructing the Dye designed course, since the Dye signature course is a key element for the success of the project concept.

Evaluation of Golf Market

The following is intended as a brief review of significant findings and recommendations relating to the golf market evaluation aspects of the proposed Jefferson Parish golf facility. Specific information and data relating to the summary is included within the text of the detailed golf market evaluation in Part II of this report.

Market Demand Potential

Review and evaluation of the demographic and socioeconomic characteristics of the resident population within the market area for the proposed Jefferson Parish golf facility revealed that an estimated 6 percent of those residents who are five years of age or older can be considered as potential golf participants. In comparison, it has been estimated that 5.4 percent of the Louisiana population (age-five and older segments) participate in golf.

It is estimated that the proposed facility's defined market area potentially contains nearly 60,000 resident golf participants and that approximately 30,000 of these golf participants would normally prefer to participate in the game at a public golf facility. Given the projected decrease in the resident population and a static golf participation rate, it is further estimated that, by 1995, the number of public golfers in the market area would fall to approximately 29,000.

It is estimated that the market area's existing resident public golf facility users could potentially generate approximately 545,000 annual rounds of play. It is further estimated that by 1995, given the anticipated decrease in the market area population and the utilization of static participation and frequency of play rates, that the market area's public golf participants could potentially generate approximately 540,000 annual rounds of play.

Golf Resource Associates research also indicates that public facilities will receive some play from private golf participants. It is estimated that these "crossover" golf participants will contribute approximately 35,000 rounds of play to the current market demand potential, and approximately 34,000 annual rounds of play to the projected market demand potential.

Given the presence of a visitor/tourist population in the greater New Orleans area that reportedly exceeds 6 million, additional rounds of public golf play generated from this segment must also be considered.

If U.S. averages for the age-five and older (92.5%) population, the rate of golf participation (10.8%), and frequent golfer (22.3%) categories are applied to develop a golfer profile amongst this national visitor/tourist population of 6 million, it could reasonably be estimated that nearly 135,000 additional golfers could be visiting the defined market area on an annual basis. If 50 percent of these potential golfers were to

play one round of golf during their stay in the area, approximately 70,000 additional rounds of play could be added to the overall unserved market demand potential.

In total, it is estimated that the combined resident public golf facility users, crossover private golfers, and visitor/tourist golfers could potentially generate approximately 640,000 annual rounds of play. It is further estimated that by 1995, given the anticipated decrease in the market area population and the utilization of static golf participation, frequency of play, and tourism/visitor rates, that the market area's public golf participants could also potentially generate approximately 640,000 annual rounds of play.

Unserved Market Demand

Research of existing market area golf facilities indicates that these facilities currently accommodate an estimated 524,500 annual rounds of public play.

It is estimated, on the basis of the potential demand which could be created by the market area's resident and visitor golf population less the level of demand that is accommodated by the market area's existing public golf facilities, that the current and projected unserved demand potential is approximately 120,000 annual rounds of play.

Market Mix

For the most part, the resident population in the Jefferson Parish market area has been exposed to inexpensive public golf facilities of fair to marginal quality for a number of years. The potential operating success of an additional public golf facility in this market, particularly from the perspective of a resident golfer will be highly dependent upon the implementation of a competitive fee structure. Residents of the parish should be offered a discounted fee if possible. Because maintenance conditions at other public golf facilities in the area are not particularly noteworthy, The Jefferson Parish facility could derive an even greater level of play by exceeding the otherwise marginal maintenance practices of these other area public golf facilities.

The visitor/tourist golfer will expect to play on a golf course of higher quality, and will usually pay a higher fee to be able to do so. By offering the resident golfer a discount, the facility will essentially be expecting the visiting golfer to bear the costs associated with designing, building, and maintaining a golf course of superior quality to most others in the market area. A premium of fifteen to twenty percent over resident fee levels would be reasonable.

With respect to the levels of play that could be anticipated from each of these two market segments, it is nearly impossible to definitively predict such a distribution of

play. Based on GRA experience in golf markets throughout the United States and local and regional experience throughout the West South Central region and the greater New Orleans area, it would be reasonable to expect that the resident population should make up the majority of play at the proposed facility.

With the implementation of an aggressive marketing plan-one that emphasizes individual and group outing play from conventioneers and tourists, it could be anticipated that at least 25 percent of play at the proposed Jefferson parish golf facility could be derived from the tourist/visitor segment of the golf market, with the remaining 75 percent derived from the resident population.

Golf Market Conclusions

The market potential for a public golf facility in the Jefferson Parish market area based on the level of support which might be derived from the estimated existing (1990) and future (1995) resident public golf market demand potential, only slightly exceeds (53,020 current and 46,646 projected) the annual rounds of play that would normally be accommodated (45,000 to 50,000 rounds) by a market area 18-hole public golf facility. This would seem to indicate that the resident public golf population is currently well served by existing market area public golf facilities.

There are, however, various other golf participation segments which must be considered. One segment of golfer whose potential contribution to the overall market demand potential which has not been quantified is the "unaccommodated" private golf participant. Although difficult to quantify, it is likely that many of the market area's potential golf participants who have been identified within the public golf market demand potential would be the private golf participant. This type of golfer will most likely require facilities and amenities that far exceed the quality of facilities found at most of the existing New Orleans municipal golf facilities, some daily fee and some private facilities.

In addition, the tourist/visitor/convention golf participation segment is an important factor to consider. According to local sources, the tourism related industries have always thrived in the New Orleans area, and various local tourism officials responded favorably to questions concerning the use of golf as a marketing tool to encourage a visit to the New Orleans area.

Although rounds generated by visitors to the area could easily exceed 70,000 per year, it would not be advisable to build a golf facility based solely on the potential rounds that may be derived from visitor populations. A municipal golf facility in Jefferson parish should primarily serve as a recreational amenity for residents of the Parish. It would also be available to the tourist, convention and motel/hotel facilities of Jefferson parish. Properly promoted, the proposed Jefferson Parish municipal golf facility could attract

regional, state, and national tournament events as well.

Although the success of any golf facility is always highly dependent upon the qualifications, experience, and effectiveness of the facility's on-site management, given the proposed facility's type, size and anticipated quality, it is the opinion of Golf Resource Associates that the actual rounds of play accommodated by the proposed facility could equal 45,000 to 50,000-an annual level of play that should be typical of a well-managed and, in terms of user fees, affordable 18-hole municipal golf facility in the Jefferson parish market area.

The total number of rounds of play on an annual basis is also highly dependent upon the marketing strategy of the facility. Although many municipalities look upon marketing as the domain of the private sector, more municipal golf facility operators have come to the realization that they must develop not only a loyal clientele, but also attract play from sources such as group outings and convention play.

Based on an aggressive marketing strategy, it could be anticipated that the proposed Jefferson parish facility would accommodate approximately 35,000 rounds of play during the first year of operation, and could reach operational maturity (50,000 annual rounds of play) by the fifth year of operation. Based upon a more limited approach to marketing in proposed facility's operating strategy, 30,000 to 35,000 rounds could be expected in the first year of operation. By the fifth year, rounds of play could reach 45,000 or more, depending upon the overall acceptance of the facility by the resident population.

Programmed Facilities

The Jefferson Parish Municipal Golf Course proposed in this study is a championship quality, regulation play, eighteen (18) hole golf course developed on a site adequate in size to accommodate the design requirements of a top quality golf facility. It is proposed to be designed and built by a known name in golf design, P.B. Dye of P.B. Dye, Inc. The project would include the golf course, practice range, a combination club house/pro shop/cart storage building, maintenance facilities, parking and other normally required facilities.

Golf Course Area

The total area recommended for this project would be a minimum site of 175 acres. This would provide adequate space for layout and design of the golf course, practice range, combination club house/pro shop/cart storage building, maintenance facility, parking and restroom/shelters on the course. Of the total 175 acres, 150 would be utilized for the golf course, 20 acres for the driving range, 4 acres for parking and drives and one acre for club house/pro shop/cart storage building and surrounding grounds.

Combination Clubhouse/Pro Shop/Cart Storage Building

Although an initial temporary pro shop without clubhouse is indicated as a method of starting the project with reduced capital investment; the concept of a combination Clubhouse/Pro Shop/Cart Storage Building should be considered. This approach requires more initial capital investment but can provide certain long term construction cost savings. The proposed building would be a modest to average size facility of approximately 12,000 square feet. The following allocations of space are proposed. A detailed program of space requirements would have to be prepared if the project moved to the design phase.

Pro Shop	1,000.00 s.f.
Club House	5,000.00 s.f.
Cart Storage	6,000.00 s.f.
Total	12,000.00 s.f.

Maintenance Facility

A maintenance building of approximately 6,000 to 8,000 s.f. to house golf course maintenance and supplies would be required for the project.

Parking

Golf course usage at peak times would require approximately 120 parking spaces. In addition to parking, appropriate drop off areas, service drives, walkways and cart paths would be provided.

Miscellaneous

Two restroom/shelter buildings of approximately 100 s.f. each would be positioned at the most functionally beneficial locations on the golf course.

Site and Conceptual Design

Site

The site evaluation is for a prototypical site in Jefferson Parish which would be of the size necessary to construct a 175 acre golf course. Areas of Jefferson Parish where sufficient acreage exist in this mass are located primarily on the Westbank and have the following topography.

The general topography found in this region supports a site which has 2' to 5' contour lines where the total site contours do not change more than 5'. The low elevations are typical for land in Jefferson Parish and would indicate that the use of drainage ponds would be required in the design of the Golf Course.

The site would be classified as drained wetlands and would be found within the levied areas of Jefferson Parish and thereby protected from flooding. Mitigation to the site will be required to obtain the necessary permits.

The site should be adjacent to roads and highways which offer good transportation access from most points in the region. High visibility is not necessary. Three (3) Phase Power, municipal sewer and water should be available on or near the site.

Poor structural soils do exist, and therefore certain quantities of dredging and fill would probably be required. Soil is very good fertile top soil for growing. Its suitability for grassing has to be determined.

General Development and Construction Cost(s)

From the beginning of this project, the concept has been to develop a municipal course which would be economically feasible to operate and which could be developed at a limited or no cost to the Parish. Land costs of between $2,000,000-$5,000,00 would be required to purchase 175 acres of unzoned vacant land at current land prices of between $.25 per square foot to $.75 per square foot.

These land cost(s) have not been included in the general development and construction costs estimated by P. B. Dye, Inc. It has been assumed that the golf course would be constructed on land donated to Jefferson Parish or to a representative of Jefferson Parish. Given this concept, we estimate the 1991 cost of building the Jefferson Parish Municipal Golf Course at $5,678,047 not including a permanent Pro Shop or Clubhouse facility. Inclusion of the permanent Pro Shop/Club House Building would add $649,000 to the above cost for a total cost of $6,327,047.

Conceptual Golf Course Routing Plan

After an on site visit by P.B. Dye and consultation with Design Consortium a preliminary routing plan was developed and is presented herein which includes the physical layout of the 18 golf holes and approximate locations of the main features, including tees, fairways, greens, waste area, rough, hazards, and practice area. Also indicated are the recommended approximate site locations of the pro shop, club house, maintenance facilities, cart storage building, and parking areas.

From the routing plan, a conceptual delineated plan has been developed which presents the proposed Municipal Golf Course within the framework of a larger site for residential and other development.

The golf course layout planning concept provides for maximum exposure of golf course frontage for residential lots. This planning approach increases the value of the residential property making it more saleable.

Proforma and Costs

Income

The number of rounds of golf played per year, green fee cost per round, golf cart rental fees, practice range fees, food and beverage sales and pro shop sales are the major elements that determine the amount of income and cash flow for a quality golf facility.

The Jefferson Parish Municipal Golf Course is projected to support 30,000 - 35,000 rounds of golf in its opening year and to reach maximum play of 50,000 rounds in ten (10) years. Initial green fees would average $20.00 - $25.00 dollars, in which a range of fees would be applied to special category players, i.e. local residents, tourists, seniors, juniors, off season and weekday players. Priority will be given to local golfers, with "out of towner green fees 10-20% higher.

These projections would yield $600,000 - $875,000 of green fee income in the first year, or an average of $700,000. With an average 10-12% green fee increase per year over the next five years, green fee income would increase to approximately $1,500,000 annually over the next 5-7 years. Practice range usage would generate $42,000 the first year and increase in proportion to usage.

Cart rental rates are proposed to be ten dollars ($10.00) per person per round and would generate $280,000 income the first year and increase annually in proportion to attendance/play. Food/beverage and pro shop sales the first year would provide a net income of $105,000 and $70,000 respectively with similar annual increases to green fees.

Expenses

Debt service for construction and equipment costs, and golf course maintenance are the major expenses in the evaluation of the feasibility of a project of this type. Operating expenses compose the other major costs. These expenses include pro shop operation and salaries, insurance, advertising/marketing, utilities, sales and property taxes, supplies, contract services and other miscellaneous expenses.

Golf course maintenance cost can vary substantially depending on the level of quality playing conditions that the facility wishes to maintain and other factors such as weather. This cost can be as low as $200,000 annually and as high as $400,000. For the purposes of this study $300,000 has been budgeted for the first year in operation with an annual increase of 10% per year.

Pro shop operation and salaries are projected to be $150,000 for each of the first three years, $200,000 for the next five years, with approximately 10% per year increase the

next two years. Based on other comparable facilities, insurance will be $23,750 the first year and increase approximately 5% per year thereafter.

Advertising/marketing is recommended to be budgeted at $50,000 annually for the first and second year, then be reduced 5% per year as the facility's recognition and use increases. Telephone/utilities will be $17,200 the first year and is projected to increase 5% per year.

Property taxes are estimated to be $11,400 the first year with a 5% per year increase. Sales taxes at 7% are projected to be $40,000 and would increase in proportion to sales. Supplies, contract services and other incidentals form the balance of expenses and represent approximately $17,000 per year with an annual increase of 5%.

Proforma

The proforma chart indicated herein shows a ten year projection of income and expenses, and assumes a twenty year amortization. A proforma analysis detailing operating income and expenses and the net operating income is presented in the following chart. With a $550,000 per year debt service protection, the facility would become self supporting by year three and profitable by the fifth year of operation. It is assumed that the $550,000 per year will retire a total project cost of $6,327,047 within 20-25 years.

The annual debt service figure of $550,00 indicated in the proforma could vary depending on whether conventional financing or revenue bonds are used. It is assumed that an interest rate in the range of 7-9 percent could be secured for financing of the project.

To facilitate reduced capital cost at project inception, a temporary pro shop and separate cart building without club house facilities is indicated in this cost summation. If this approach is used, at a future date when the project's degree of success justifies, it is recommended that an appropriate club house/pro shop facility should be constructed.

Proforma Costs Projections

Jefferson Parish - 1,000's

Year #	1	2	3	4	5	6	7	8	9	10
Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
# Rounds	35	35	35	35	40	40	45	45	50	50
Per Round	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25
Cart Fee	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Income										
Greens Fees	700.00	787.50	875.00	962.50	1200.00	1300.00	1575.00	1687.50	2000.00	2125.00
Cart Rental	280.00	280.00	280.00	280.00	320.00	320.00	360.00	360.00	400.00	400.00
Pract. Range	42.00	52.50	52.50	52.50	60.00	60.00	67.50	67.50	75.00	75.00
Food/Bev(Net)	105.00	105.00	105.00	105.00	120.00	120.00	135.00	67.50	75.00	75.00
Pro Shop(Net)	70.00	70.00	70.00	70.00	80.00	80.00	90.00	45.00	50.00	50.00
Membership Dues	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	$1,197.00	$1,295.00	$1,382.50	$1,470.00	$1,780.00	$1,880.00	$2,227.50	$2,227.50	$2,600.00	$2,725.00
Cost of Sales										
Cart (Lease)	65.00	65.00	65.00	70.00	70.00	70.00	75.00	75.00	80.00	80.00
Gross Income	$1,132.00	$1,230.00	$1,317.50	$1,400.00	$1,710.00	$1,810.00	$2,152.50	$2,152.50	$2,520.00	$2,645.00
Operating Expenses										
Advertising	50.00	50.00	47.50	45.13	42.87	40.73	38.69	36.75	34.92	33.17
Insurance	23.75	25.00	26.25	27.56	28.94	30.39	31.91	33.50	35.18	36.94
Pro Shop Operation and Salaries	150.00	150.00	150.00	200.00	200.00	200.00	200.00	200.00	225.00	225.00
Prop. Taxes	11.40	12.00	12.60	13.23	13.89	14.59	15.32	16.08	16.89	17.73
Admission / Sales Ta	40.00	44.38	48.12	47.51	67.14	70.86	92.18	89.68	112.39	118.83
Supplies	2.00	2.40	2.52	2.65	2.78	2.92	3.06	3.22	3.38	3.55
Telephone/Util's	17.20	18.00	18.90	19.85	20.84	21.88	22.97	24.12	25.33	26.59
Contract Services	7.60	8.00	8.40	8.82	9.26	9.72	10.21	10.72	11.26	11.82
Miscellaneous	7.60	8.00	8.40	8.82	9.26	9.72	10.21	10.72	11.26	11.82
Golf Course Maint.	300.00	330.00	363.00	399.30	439.23	483.15	531.47	558.04	585.94	615.24
Capital	25.00	27.50	30.25	33.27	36.60	40.26	44.29	48.72	53.59	58.95
Total	$634.55	$675.28	$715.94	$806.14	$870.81	$924.22	$1,000.31	$1,031.55	$1,115.14	$1,159.64
Cash Flow	$497.45	$554.72	$601.56	$593.86	$839.19	$885.78	$1,152.19	$1,120.95	$1,404.86	$1,485.36
Debt Service	550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00	550.00
ROI	($52.55)	$4.72	$51.56	$43.86	$289.19	$335.78	$602.19	$570.95	$854.86	$935.36
Accumulated ROI	($52.55)	($47.83)	$3.73	$47.59	$336.78	$672.56	$1,274.75	$1,845.70	$2,700.56	$3,635.92

Golf Course Construction Costs Breakdown

Item Description	Qty.	Unit	Budgeted Costs	Percent of Job
Preliminary Items - Total			$3,983,294.33	
1 P. B. Dye Design	1.00	ls	$335,000.00	8.41
2 Clearing	1.00	ls	$141,600.00	3.55
3 Equipment Rental	1.00	ls	$531,900.00	13.35
4 Equipment Repairs & Maintenance	1.00	ls	$147,500.00	3.70
5 Surveying & Soil Tests	1.00	ls	$40,000.00	1.00
6 Final Touch Supervision / Shaping	1.00	ls	$355,000.00	8.91
7 Greens Materials	1.00	ls	$147,800.00	3.71
8 Finish Labor	1.00	ls	$349,500.00	8.77
9 Drainage Materials	1.00	ls	$90,301.33	2.27
10 Irrigation Materials & Installation	1.00	ls	$365,158.00	9.17
11 Grassing	1.00	ls	$167,780.00	4.21
12 Bring In	1.00	ls	$63,005.00	1.58
13 Bunkers Sand	1.00	ls	$87,500.00	2.20
14 Bridges & Bulkheading	1.00	ls	$98,750.00	2.48
15 Cartpaths	1.00	ls	$302,500.00	7.59
16 Shelters & Bathrooms	1.00	ls	$42,500.00	1.07
17 Maintenance Building	1.00	ls	$332,500.00	8.35
18 Landscaping	1.00	ls	$160,000.00	4.02
19 Legal & Administration	1.00	ls	$225,000.00	5.65

Golf Course Equipment Costs Breakdown

Bid Item Description	Qty.	Unit	Total	Percent of Job
Preliminary Items - Total			$239,670.00	
1 Greens	1.00	ls	$35,000.00	14.60
2 Tees & Approches	1.00	ls	$23,900.00	9.97
3 Fairways	1.00	ls	$25,000.00	10.43
4 Roughs	1.00	ls	$15,600.00	6.51
5 Bunkers	1.00	ls	$14,000.00	5.84
6 Shop Equipment & Tools	1.00	ls	$23,075.00	9.63
7 Cultural Tools	1.00	ls	$8,700.00	3.63
8 Irrigation Equipment & Repairs	1.00	ls	$1,950.00	0.81
9 Transportation Equipment	1.00	ls	$73,000.00	30.46
10 Common Grounds	1.00	ls	$19,445.00	8.11

Design/Construction Costs

Design and construction costs can vary greatly for golf course development. Some prime factors affecting the costs of these elements are quality of course design, concept, features/details of design, size (acreage) of the facility, location and geographic features of the site. To estimate costs for this study, Dye Golf, Inc. was consulted since they are actively involved in the design and construction of several courses of comparable quality to the one proposed in this study. Following is a summary of project design, construction and equipment costs. It should be noted that all cost are estimates. Actual design with material and labor take offs, plus overhead and profit are required to determine actual construction costs. It should be noted that all costs are estimates. Actual design with material and labor take offs, plus overhead and profit are required to determine actual construction costs.

Golf Course Design, Construction and Equipment Costs

A. Dye Golf, Inc. and Design and Construction Costs

1. Golf Course Construction	$3,090,794	
2. Design Fee	$335,000	
3. Legal and Administration Fees	$225,000	
4. Maintenance Building	$332,500	
Sub total: Dye Golf, Inc. Costs		$3,983,294

B. Other Facilities Costs

1. Road & Utilities to Club House 2500 s.f. @ $250/l.f.	$ 625,000	
2. Golf Cart Storage Building 6000 s.f. @ $45/s.f.	$ 270,000	
3. Temporary Pro Shop	$ 50,000	
4. Parking Lot and Drives 120 spaces @ $1100/space	$ 132,000	
5. Design Fees for B.1, B.2, B.3, B.4 @ 10%	$ 107,700	
Sub total: Other Facilities Construction		$1,184,700

C.	Golf Course Equipment	$ 239,670	
	Subtotal: Costs of A, B and C		$5,407,664
D.	Land Cost-Assume donated site	0	
E.	Contingency @ 5%	$ 270,383	
	Estimated Initial Project Costs		$5,678,047
F.	Future Permanent Club House/Pro Shop		
	1. Club House/Pro Shop Building 6000 s.f. @ $85/s.f.	$ 510,000	
	2. Site Development for Club House Drives, Cart Paths, Landscaping	$ 80,000	
	3. Design Fees for F.1 & F.2 @ 10%	$ 59,000	
	Sub Total: Permanent Clubhouse/Pro Shop		$ 649,000
	Total Estimated Project Costs		$6,327,047

Marketing Program

Concept

The proforma data developed by Dye from their experience in designing, constructing, and operating golf courses has been augmented to include in the operating expenses of $50,000 dollars a year for the first two years for marketing the Jefferson Parish Municipal Golf Course facility to the tourist/vacationing golfer. Marketing cost decreases in subsequent years on the basis that awareness of the course's reputation is widespread.

From interviews conducted with the Greater New Orleans Hotel-Motel Association, the Jefferson Parish Economic Development Council (JEDCO), the Greater New Orleans Tourist Commission, Jefferson Parish, and the Convention and Meeting Planners of the greater New Orleans area, the vacationing golfer is an unknown quantity in the New Orleans tourist market.

In the context of tourist promotion the game of golf is perceived as a resort activity along with sun and sand. New Orleans is not viewed as a resort community and has never been promoted as such. The summer months June, July, and August are the "slow season" for tourism but are considered playable months for the game of golf. Marketing the Jefferson Parish Municipal Golf Facility would target the summer months and those off season months when tourism is fair January, May and September, to attract the vacationing golfer to the greater New Orleans area.

The budgeted marketing program is essential if this municipal facility is to be used as an economic development tool to attract the vacationing and tourist golfer to Jefferson Parish. The marketing program would concentrate on working with established efforts such as the New Orleans Marketing Committee which has been established to target the summer traveler. Promoting golf vacation packages in New Orleans could be one of the strategies adopted by the New Orleans Marketing Committee.

Tourist Golfer

Currently access by the tourist and the business traveler to the Greater New Orleans area golf facilities is handled through the front desks and concierge service of major hotels. The tourist/business traveler inquires from the hotel concierge who maintains a file on golf courses, their location, and fees. The concierge will call and reserve a tee time for the guest. With the exception of the New Orleans Country Club and the Metairie Country Club, the golf courses in the New Orleans Metropolitan Area are accessible and utilized by out of town visitors. As is often the case, the tourist can play during the week and at times not normally considered peak times so that availability is generally good. Green fees plus cart costs vary from a low of $10.00 to a high of $75.00. The tourist/business traveler come with their clubs expecting to be able to play, because as one concierge put it, "Is there no place in this country where one cannot play golf? Golf

club rental is also available.

According to the golf professionals at private, daily fee and municipal courses throughout the region, the tourist/business traveler golfer is a major player in the financial health of these golf facilities. The tourist golfer augments the play by local golfers. Private clubs maintain an "out of towner" category and fee structure to accommodate this golfer. Each golf facility deals directly with the hotels and business meeting and convention planners. These is no promotional literature presenting the golf courses of the region in a comprehensible form. Although critical to the operations of these golf facilities, there is very little promotion of Golf in the metropolitan area.

In a more structured manner, golf is utilized by the meeting and convention planners of the Greater New Orleans area who offer and are asked to provide the one (1) day golf tournament as an adjunct to the corporate, business and convention meeting. The golf facilities currently available in the New Orleans area have been adequate to meet their demand.

Vacationing Golfer

According to the National Golf Foundation, 6.6 million golfers take one (1) or more golf vacations every year. This represents 30.4% of the nations 21.7 million golfers. Those that take golf vacations average 2.2 trips annually. The average length of each golf vacation is 12 days, with golf being played on an average of six (6) days out of twelve (12).

Profile of the Golf Vacationer

Forty (40%) percent of golf vacationers are frequent golfers playing 25 or more rounds of golf annually. This contrasts with only 25% of the golf population in general being in the frequent golfer category.

Forty-Nine percent of golf vacationers have college degrees, 80% are married, and the average household income is $40,000. The leading destinations of Golf Vacations are Florida with 17.3%, South Carolina 8.0%, Arizona 7.6 %, California 6.0% and North Carolina 5.9%.

The purpose of the marketing program of the Jefferson Parish Municipal Golf facility would be to tap into this market for the vacationing golfer. Essential to the promotion would be a top rated golf facility of a quality the national golfer has come to expect.

Part II

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Introduction

Golf Resource Associates, Inc. was retained by Design Consortium, Ltd. of New Orleans, Louisiana to prepare a Golf Market Evaluation report which was to address the market potential for an eighteen-hole municipal golf facility as proposed for development by Jefferson Parish, Louisiana.

Golf Resource Associates (GRA) is a golf facility development and operations consulting firm with nationwide experience and expertise in all aspects of the planning, development, operation, and marketing of public and private golf facilities. GRA headquarters are located near Atlanta, Georgia and additional GRA offices are maintained near Boston, Massachusetts; Tampa, Florida; and, Salem, Oregon.

Since 1986, Golf Resource Associates has been a leader in providing a wide range of development and operational advice and services to those within the golf industry, including prospective developers, existing operators, and financial institutions. The GRA professional staff has provided golf facility development and operations advice and direction to hundreds of public and private golf facility developers and operators throughout the United States and, in total, has a combination of more than seventy-five years of golf facility development and operations consulting experience.

The Golf Market Evaluation report was to specifically provide a comprehensive review of the proposed facility's anticipated golf market demand potential in terms of the potential number of existing and projected public golf facility users and the potential rounds of play which might be generated by these users. As a result of this evaluation, the report was to address existing and projected unserved market demand potential within a defined facility market area as established by GRA. It was not within the scope of this report to address the operating potential or overall economic viability of the proposed facility.

Mr. Anthony Crocco, a GRA associate consultant, conducted the on-site research for the study project and collected golf facility operating information from public and private golf facilities within the proposed facility's defined market area. When possible, Mr. Crocco also conducted interviews with key facility operating and administrative personnel. In addition to obtaining information concerning prevailing fee structures, data pertaining to typical market area golf facility operating characteristics, such as number of annual operating days and the annual rounds of play normally accommodated, was also collected.

Market area population estimates and projections, as well as pertinent demographic information used within the report, were obtained from Equifax Marketing Decision Systems, Inc., a nationally recognized purveyor of demographic and marketing information based in Encinitas, California. All pertinent information obtained from Equifax

Marketing Decision Systems has been interpreted by Golf Resource Associates in terms which allow for reasonable comparison to various accepted participant and operational standards for public golf facilities.

As a part of its continuing research into the development, operation and marketing of golf facilities, GRA maintains an extensive database of golf participation and golf course operations information. The facility operating data contained in the GRA database has been derived from on-site research of public golf facilities in every major region of the United States and, in total, reflects the operating characteristics of more than 600 of the nation's golf facilities. Much of the material in this report, including estimates pertaining to resident golf participation potential, has been drawn from this database.

The GRA database, in addition to internally generated research data, contains information compiled by national organizations, such as the Professional Golfers Association of America, the National Golf Foundation, the National Sporting Goods Association, the Golf Course Superintendents Association of America, the United States Golf Association, and recognized private research organizations and firms, including Market Facts, Inc., the A.C. Nielsen Company, and the Urban Land Institute.

It should be understood by those who will use this report as a guideline, however, that each golf market, as well as each development situation, is unique unto itself and that averages, medians, percentages and estimates which will enable a precise prediction of market area demand are rarely available.

It must be further understood that conclusions or recommendations contained within the report herein, while they may sometimes conflict with generally established standards, are made on the basis of those standards which Golf Resource Associates found to be generally applicable to the special demands and situations associated with the development of the proposed golf facility and golf participation and play potential within the defined Jefferson Parish market area.

Terms and Abbreviations

The following definitions and explanations concern common terms and abbreviations which are used within the text of this report. Given regional and local variations in the usage of certain golf and market research terms, it is of benefit to become acquainted with the use of such terms and abbreviations as they are used within this report.

Common Terms

Private Golf Club: A private golf club is defined as a golf facility which restricts use to members of the club and their guests. The members may or may not have an individual proprietary interest, or the club may be owned by private enterprise which makes it available to members for dues or fees.

Daily Fee Golf Facility: A daily fee golf facility is defined as a golf facility which is privately-owned but open to public play. Memberships or annual passes may or may not be available. Golf facilities which offer limited public accessibility through payment of green fees (semi-private golf facilities) are included in this category.

Municipal Golf Facility: A municipal golf facility is defined as a golf facility which is owned by a tax-supported agency such as a city, county, state, school, park district, or other special tax districts. The facility may be operated by the agency or by private enterprise under the terms of lease agreement or other arrangement. This type of facility is open to the general public and may or may not offer memberships or annual passes.

Golf Facility: A golf facility is a private or publicly accessible facility which offers the opportunity to participate in the game of golf on one or more regulation length, executive length or par-3 golf courses. A golf facility contains at least one nine-hole course and may include different types of courses such as a regulation length course and a par-3 course.

Golf Course: A golf course is a set of at least nine separate holes and not more than 27 holes and may be of regulation length, executive length or par-3 length.

Regulation Length Golf Course: A traditional length or full-sized golf course with a total length of over 5,200 yards for 18 holes and a par rating of 66 or more.

Executive or Mid-Length Golf Course: A shorter or compact version of the regulation length golf course with a total length of 4,000 yards to 5,200 yards for 18 holes with a par rating of 58 to 66.

Par-3 Golf Course: A short course comprised solely of par-3 holes with a total length that is under 4,000 yards for 18 holes and a par of 54 strokes.

Golf Participants: Persons who engage in one or more rounds of play on a regulation length, executive length, or par-3 golf course. A "public" golf participant is a golfer who plays the majority of his or her rounds of play at a municipal or daily fee golf facility. A "private" golf participant is one who most often participates in the game at a private membership golf club.

Potential Golf Participants: Persons residing within a specific market area who, on the basis on the socioeconomic profile of the market area population, would normally have an inclination to participate in golf. Those included within the potential golf participant segment may, or may not, actually participate in golf.

Round, or Round of Play: A unit used to measure golf course frequency of play. A round designates one golf participant, on one particular day, and includes play of 9 or 18 holes.

Abbreviations

GRA: Golf Resource Associates, Inc.

ASGCA: American Society of Golf Course Architects

CMAA: Club Managers Association of America

EMDS: Equifax Marketing Decision Systems, Inc.

GCA: Golf Course Association

GCSAA: Golf Course Superintendents Association of America

NGF: National Golf Foundation

NRPA: National Recreation and Park Association

NSGA: National Sporting Goods Association

PGA: Professional Golfers Association of America

PGMA: Public Golf Management Association

ULI: Urban Land Institute

USGA: United States Golf Association

Executive Summary

The following is intended as a brief review of significant findings and recommendations relating to the development of the proposed Jefferson Parish golf facility. Specific information and data relating to the summary is included within the text of this report.

Market Demand Potential

- Review and evaluation of the demographic and socioeconomic characteristics of the resident population within the market area for the proposed Jefferson Parish golf facility revealed that an estimated 6 percent of those residents who are five years of age or older can be considered as potential golf participants. In comparison, it has been estimated that 5.4 percent of the Louisiana population (age-five and older segments) participate in golf.

- It is estimated that the proposed facility's defined market area potentially contains nearly 60,000 resident golf participants and that approximately 30,000 of these golf participants would normally prefer to participate in the game at a public golf facility. Given the projected decrease in the resident population and a static golf participation rate, it is further estimated that, by 1995, the number of public golfers in the market area would fall to approximately 29,000.

- It is estimated that the market area's existing resident public golf facility users could potentially generate approximately 545,000 annual rounds of play. It is further estimated that by 1995, given the anticipated decrease in the market area population and the utilization of static participation and frequency of play rates, that the market area's public golf participants could potentially generate approximately 540,000 annual rounds of play.

- GRA research also indicates that public golf facilities will receive some play from private golf participants. It is estimated that these "crossover" golf participants will contribute approximately 35,000 rounds of play to the current market demand potential, and approximately 34,000 annual rounds of play to the projected market demand potential.

- Given the presence of a visitor/tourist population in the greater New Orleans area that reportedly exceeds 6 million, additional rounds of public golf play generated from this segment must also be considered.

- If U.S. averages for the age-five and older (92.5%) population, the rate of golf participation (10.8%), and frequent golfer (22.3%) categories are applied to develop a golfer profile amongst this national visitor/tourist population of 6 million, it

could reasonably be estimated that nearly 135,000 additional golfers could be visiting the defined market area on an annual basis. If 50 percent of these potential golfers were to play one round of golf during their stay in the area, approximately 70,000 additional rounds of play could be added to the overall unserved market demand potential.

- In total, it is estimated that the combined resident public golf facility users, crossover private golfers, and visitor/tourist golfers could potentially generate approximately 640,000 annual rounds of play. It is further estimated that by 1995, given the anticipated decrease in the market area population and the utilization of static golf participation, frequency of play, and tourism/visitor rates, that the market area's public golf participants could also potentially generate approximately 640,000 annual rounds of play.

Unserved Market Demand

- Research of existing market area golf facilities indicates that these facilities currently accommodate an estimated 524,500 annual rounds of public play.

- It is estimated, on the basis of the potential demand which could be created by the market area's resident and visitor golf population less the level of demand that is accommodated by the market area's existing public golf facilities, that the current and projected unserved demand potential is approximately 120,000 annual rounds of play.

Conclusions

The market potential for a public golf facility in the Jefferson Parish market area, based on the level of support which might be derived from the estimated existing (1990) and future (1995) resident public golf market demand potential, only slightly exceeds (53,020 current and 46,646 projected) the annual rounds of play that would normally be accommodated (45,000 to 50,000 rounds) by a market area 18-hole public golf facility. This would seem to indicate that the resident public golf population is currently well served by existing market area public golf facilities.

There are, however, various other golf participation segments which must be considered. One segment of golfer whose potential contribution to the overall market demand potential which has not been quantified is the "unaccommodated" private golf participant. Although difficult to quantify, it is likely that many of the market area's potential golf participants who have been identified within this report as "private" golfers could be included within the public golf market demand potential. This type

of golfer will most likely require facilities and amenities that far exceed the quality of facilities found at most of the existing New Orleans municipal golf facilities.

In addition, the tourist/visitor/convention golf participation segment is an important factor to consider. According to local sources, the tourism related industries have always thrived in the New Orleans area, and various local tourism officials responded favorably to questions concerning the use of golf as a marketing tool to encourage a visit to the New Orleans area.

Although rounds generated by visitors to the area could easily exceed 70,000 per year, it would not be advisable to build a golf facility based solely on the potential rounds that may be derived from visitor populations. A municipal golf facility in Jefferson Parish should primarily serve as a recreational amenity for residents of the Parish. It would also be available to the tourist, convention, and business traveler market as an added incentive to utilize the convention and motel/hotel facilities of Jefferson Parish. Properly promoted, the proposed Jefferson Parish municipal golf facility could attract regional, state, and national tournament events as well.

Although the success of any golf facility is always highly dependent upon the qualifications, experience, and effectiveness of the facility's on-site management, given the proposed facility's type, size, and anticipated quality, it is the opinion of Golf Resource Associates that the actual rounds of play accommodated by the proposed facility could equal 45,000 to 50,000—an annual level of play that should be typical of a well-managed and, in terms of user fees, affordable 18-hole municipal golf facility in the Jefferson Parish market area.

In summary, it is the opinion of Golf Resource Associates that the overall level of demand for public golf in the Jefferson Parish market area, is sufficient to warrant further exploration of the feasibility of developing the proposed Jefferson Parish municipal golf facility.

Evaluation of Market Demand

The primary objectives of the market demand evaluation is to ascertain and document the potential level of demand for golf within the proposed facility's specific market area and, to interpret these findings in terms of the potential amount of surplus, or unserved demand that is likely to be available for absorption by the proposed facility.

The following discussion provides information concerning the Jefferson Parish, Louisiana area; a definition of the geographical boundaries of the market area that is likely to be served by the proposed golf facility; examines and evaluates those socioeconomic and demographic characteristics which relate to the probable level of resident golf participation; and, based upon estimated levels of the potential demand for golf within the market area, provides estimates concerning the potential extent of existing and projected unserved market demand.

Market Demand Potential

While the avid golf participant may occasionally travel an unusually long distance to participate in a round of golf, ongoing golf participation research indicates that the typical public golf facility will derive the majority of its annual play from a definable market area.

Research concerning the travel habits of the typical golf participant, for instance, reveal that the typical golf participant resides within approximately 10 miles and/or a 17-minute drive of the golf facility at which he most often participates. Practical experience also indicates that a golfer's travel habits will vary in accordance with ease of travel within the local area and the overall extent of golf facility accessibility.

A Market Facts, Inc. survey, *Golf Participation in the United States*, indicates that approximately 58 percent of the nation's golf participants live within ten miles of the golf course at which they most often play, and that 87 percent of the typical golf facility's most frequent users reside within a 20-mile drive of their most frequently visited golf course destination.

Survey participants, when questioned as to the maximum distance they would be willing to travel to participate in a single round of golf, responded that 30 miles, or approximately 40 minutes of driving time, was a typical limit. Figure 1.0 (following page) provides further detail concerning the travel habits of the average golf participant and indicates the range of the market area for the typical golf facility.

The market area for the proposed Jefferson Parish golf facility, in terms of its resident golf population, is primarily based upon the anticipated travel habits of the typical golf participant and the ease of access to the proposed site via the primary and sec-

ondary roadway system within the area.

The market area for the proposed facility, denoted within this report as the "Jefferson Parish Market Area," is the geographic trade area from which the facility is most likely to attract frequent users and those users who will visit the facility on a more occasional, but somewhat regular, basis.

The geographical boundaries of the defined market area are depicted in Figure 1.1 (following page).

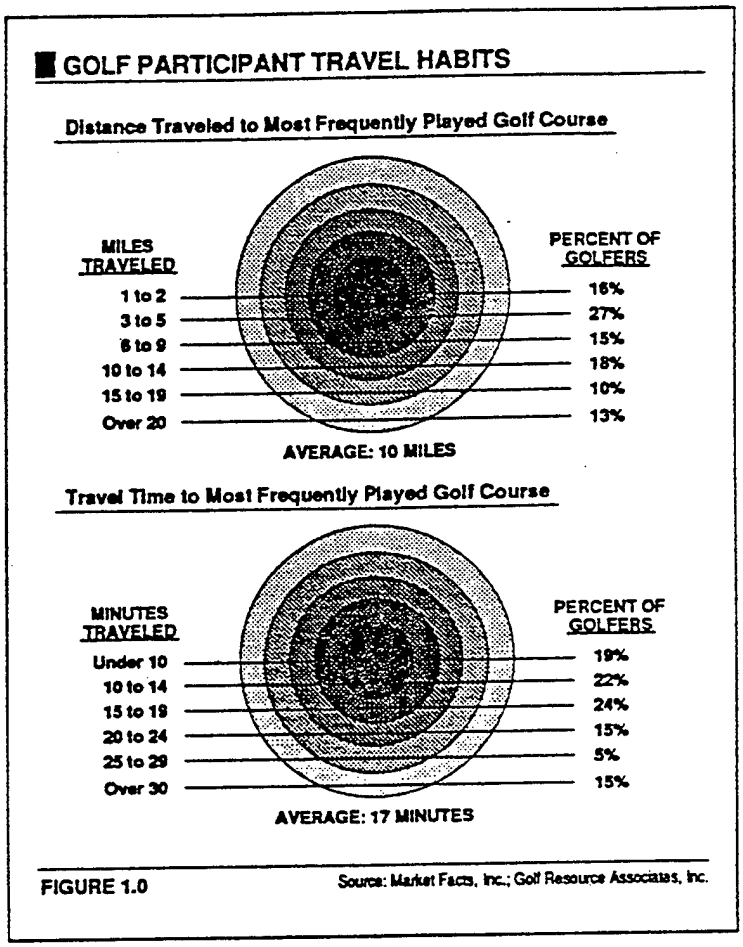


FIGURE 1.0 Source: Market Facts, Inc.; Golf Resource Associates, Inc.

As the map in Figure 1.1 indicates, the Jefferson Parish market area, as defined herein, encompasses all of Jefferson Parish, and portions of Orleans Parish, Plaquemines Parish, St. Bernard Parish, and St. Charles Parish, Louisiana. This area primarily encompasses the greater New Orleans, Louisiana area.

Major vehicular arteries within the defined market area include Interstate Routes 10 and 610; U.S. Highways 90 and 61; and, Louisiana State Routes 47, 3018, 3017, 3139, 3134, and 23. The major population centers included within the geographic boundaries of the Jefferson Parish market area, in general, are within approximately 30 to 35 minutes from the location of the likely development site for the proposed Jefferson Parish golf facility.

The following discussion is based upon ongoing golf participation research and provides a review of key demographic characteristics (age of population, household income, educational attainment, and type of employment) as they relate to the anticipated level of participation in golf.

Jefferson Parish, Louisiana Market Area—Proposed Municipal Golf Facility

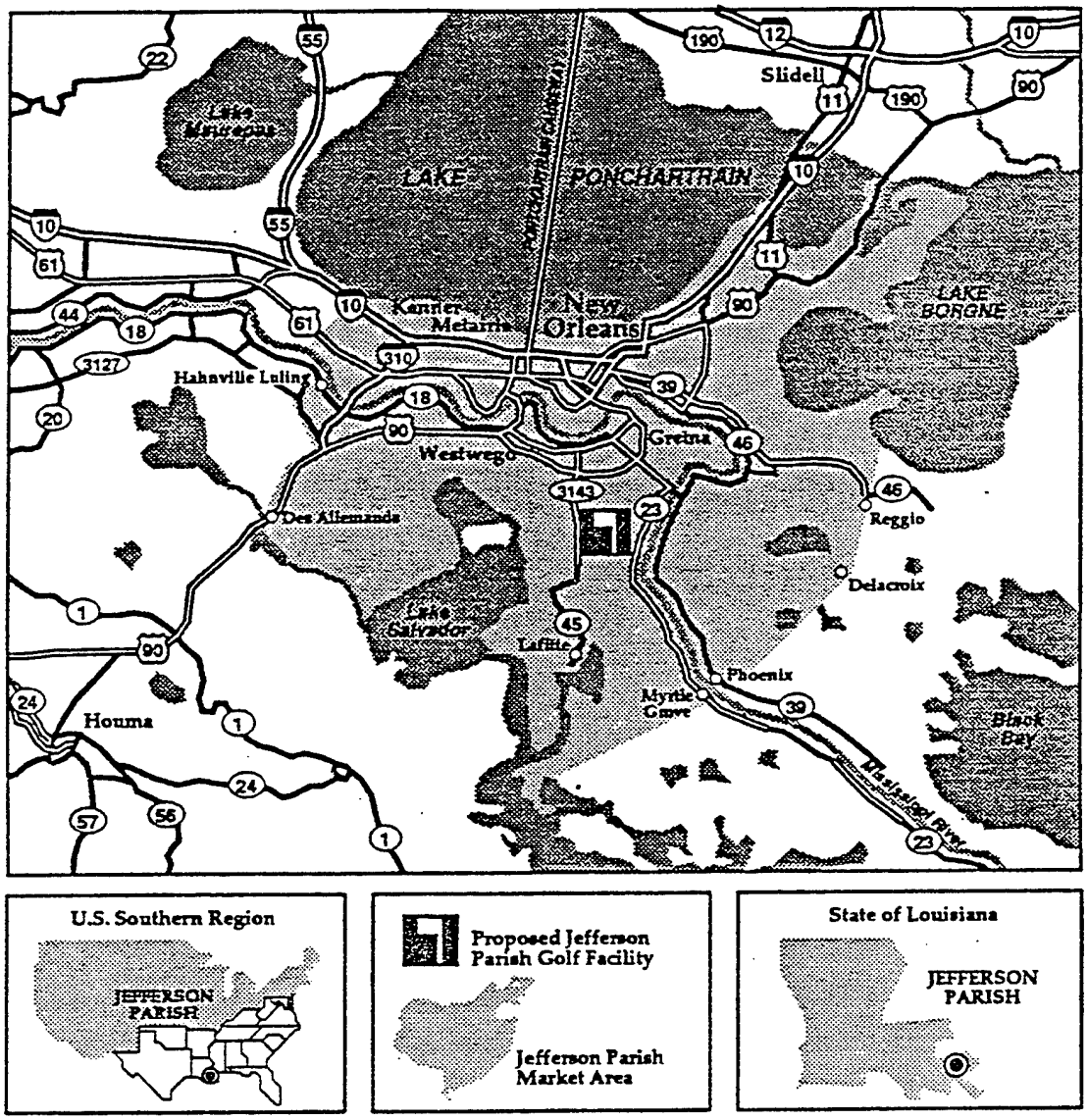


FIGURE 1.1 Source: Golf Resource Associates, Inc.

Demographic Characteristics of Golf Participants

Research concerning the characteristics of those who participate in golf continues to indicate that there is a direct correlation between the age level, the level of household income, educational attainment, and the occupational characteristics of a specific pop-

ulation and their tendency to participate in golf. In general, researchers have found that the nations public and private golf participants are more mature, have achieved a higher degree of affluence, and are better educated than the nation's population as a whole.

• **Age Characteristics of U.S. Golfers**

Golf participation surveys continue to indicate that there is a clear correlation between age and the general tendency to participate in golf.

The graph in Figure 1.2, which is based on a Market Facts January, 1989 golf participation survey, as reported in the NGF's *Golf Participation in the United States*—1990, graphically illustrates the typical relationship between age group structure of a population and the tendency for individuals within these age groups to participate in the game of golf.

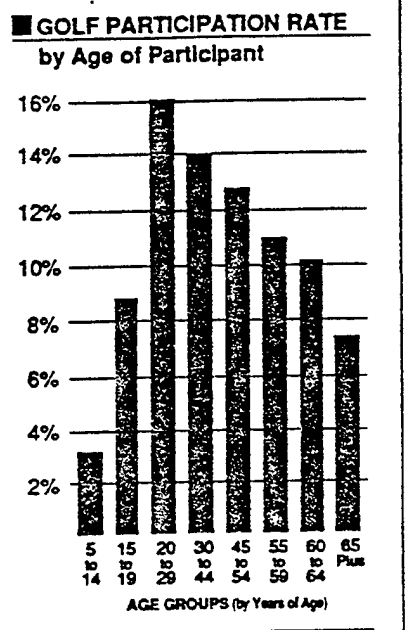


FIGURE 1.2 Source: Golf Resource Associates; NGF/Market Facts, Inc.

As Figure 1.2 indicates, the rate of golf participation among the nation's 20 to 29 year old population is, at slightly more than 16 percent, significantly higher than the rate of participation of those in other age group segments. The graph, however, also illustrates that at least one in every ten of those who fall between 30 and 59 years of age is likely to participate in the game.

• **Household Income Characteristics of U.S. Golfers**

Figure 1.3 depicts the level of golf participation by household income level as determined by Market Facts in its survey of the nation's golf participants.

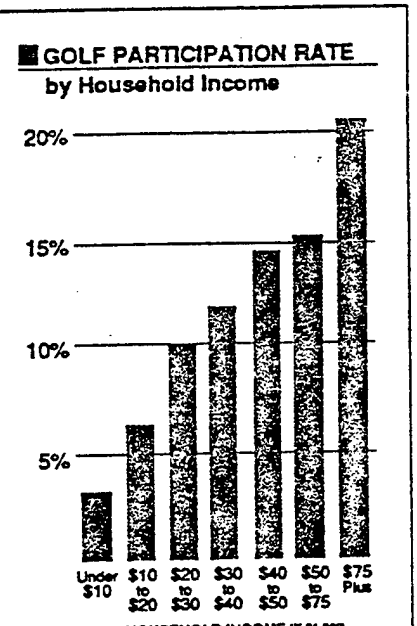


FIGURE 1.3 Source: Golf Resource Associates; NGF/Market Facts, Inc.

As the graphic clearly illustrates, there is a direct correlation between household income, and the incidence of participation in golf. In general, those who reside in households with less than $30,000 of annual income are less likely to participate in golf than the nation's population as a whole.

At the same time, as Figure 1.3 clearly indicates, those who are in households with a total of $75,000 or more income tend to participate in golf at a rate which is nearly two times greater than the average for the nation's population.

• **Educational Characteristics of U.S. Golfers**

Past National Golf Foundation surveys have found that America's typical golf participant has achieved a higher level of education than the nation's population as a whole. The median education level of all golf participants is 2.7 years of college, and the nation's public golfers have attained a median of two years of college.

Figure 1.4 depicts the relationship existing between the level of education attained and the normal tendency to participate in golf. As the graph illustrates, participation in golf tends to increase significantly as the level of education attained by the household head increases.

While less than three percent of those households who are headed by a non-high school graduate participate in golf, the incidence of golf participation among those who reside in households headed by a college graduate is more than 16 percent.

• **Occupational Characteristics of U.S. Golfers**

Research has shown that participation in golf can, for the most part, be directly linked to the type of employment in which one is engaged. As Figure 1.5 indicates, persons employed in those occupations which require higher levels of education and produce greater levels of income, generally have a much greater tendency to participate in golf.

Those employed in professional or managerial positions, for instance, are nearly twice as likely to participate in golf than those who are employed in blue collar jobs.

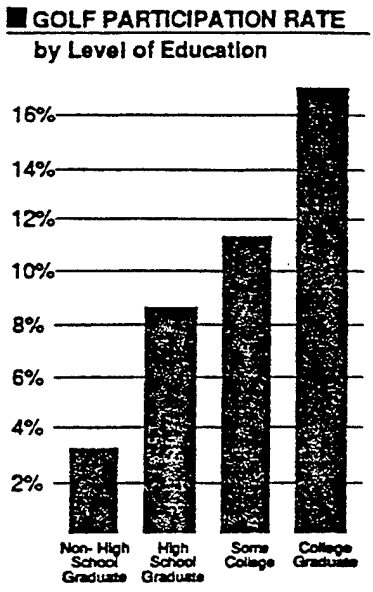


FIGURE 1.4 Source: Golf Resource Associates; NGF Market Facts, Inc.

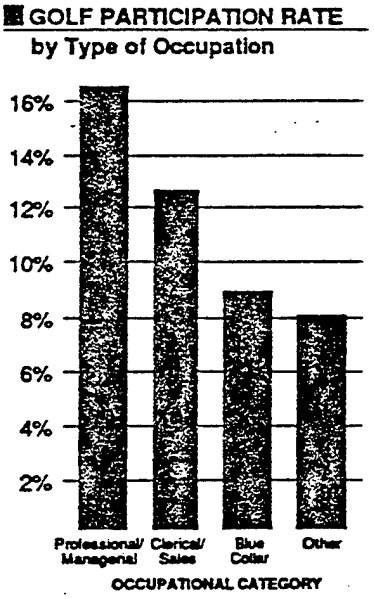


FIGURE 1.5 Source: Golf Resource Associates; NGF Market Facts, Inc.

☐ **Jefferson Parish Market Area Population Characteristics**

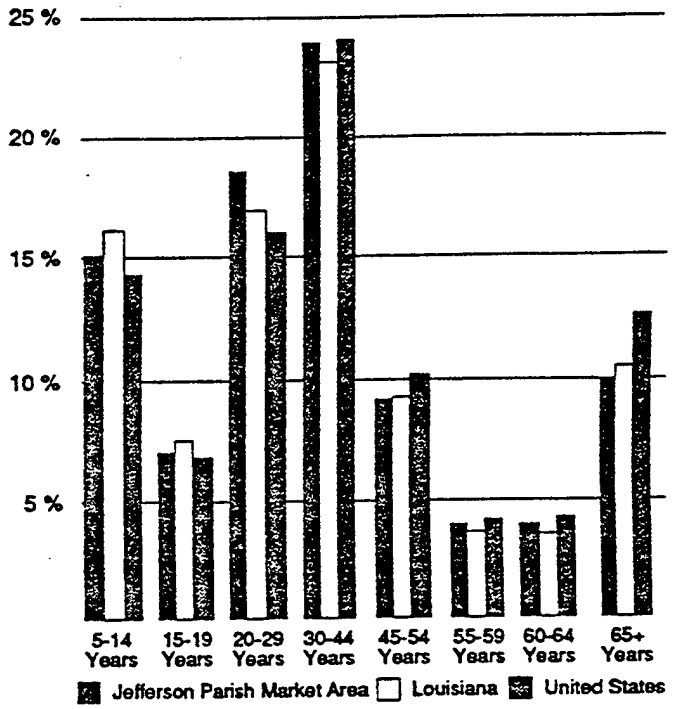
While it is virtually impossible to define the exact size or potential of any given market area, it is possible, through review and evaluation of the demographic characteristics of the resident population as compared to statewide and national norms, to derive meaningful assumptions regarding market area golf participation potential. The following evaluation of market area demographic and socioeconomic data is specifically related to those population characteristics which were identified in the foregoing discussion.

Estimates within this report which pertain to the potential level of golf participation among the market area's resident population are based upon the review and evaluation of this data in comparison to similar information for the residents of Louisiana, and the United States as a whole.

- **Jefferson Parish Market Area Age Characteristics**

As discussed, age is a key indicator of the likely tendency to participate in golf. Figure 1.6 depicts the resident population in the Jefferson Parish market area by age group and provides a comparison of this data with the populations of Louisiana and the U.S..

For further detail concerning Jefferson Parish market



Age Group	Jefferson Parish Market Area	State of Louisiana	United States
5 to 14 Years	15.2%	16.2%	14.3%
15 to 19 Years	7.1%	7.6%	6.9%
20 to 29 Years	18.6%	17.0%	16.1%
30 to 44 Years	23.9%	23.2%	24.1%
45 to 54 Years	9.3%	9.4%	10.2%
55 to 59 Years	4.0%	3.8%	4.3%
60 to 64 Years	4.0%	3.6%	4.3%
65 Years Plus	10.0%	10.5%	12.6%
Median Age	31.0	30.6	33.7
Average Age	33.4	33.1	35.6

FIGURE 1.6 Source: Golf Resource Associates; Equitax Decision Systems, Inc.

area demographic and socioeconomic characteristics, as well as those of the Louisiana and U.S. populations, see the "Appendix" section of this report. The information and data included in Figure 1.6 is presented in a manner which conforms as closely as possible with the age group definitions that are used by the Market Facts organization in their determination of the incidence of participation in golf by age group.

As Figure 1.6 indicates, nearly 56 percent of the estimated 1990 Jefferson Parish market area resident population fell into those categories, ages 20 through 59, that Market Facts, Inc. identified as having the greatest propensity, by age group, to participate in golf. In comparison, 53.4 percent of the Louisiana population, and 54.7 percent of the U.S. population is included within these age group segments.

The percentage of Jefferson Parish market area residents in the age groups which have demonstrated higher than average incidence of participation rates, those within the 30 to 59 year old age categories (37.2%), is also higher than the norm for Louisiana (36.4%) but lower than the U.S. population (38.6%) in this age group segment.

On the basis of the foregoing review of the overall age structure of the Jefferson Parish market area resident population and, specifically, the direct comparison of age group data in the most active golf participant age group segments, it is reasonable to assume that residents of the defined Jefferson Parish market area would participate in golf at a rate which would be higher than that of the typical Louisiana resident.

• Jefferson Parish Market Area Household Income Characteristics

As previously indicated, a key factor in determining a population's general tendency to participate in golf is the level of household income that has been obtained by market area residents. Figure 1.7 (following page) provides a comparison of Jefferson Parish market area household income levels, as a percent of the market area's total households, with similar data for households in the United States and Louisiana.

The graph and table illustrate that household income averages in the Jefferson Parish market area are slightly higher than the Louisiana averages for households with between $15,000 and $49,999 in annual income, and significantly higher in those households with $50,000 or more income—the income categories which typically produce, by percent of total, the most significant number of golf participants. The percentage of market area household incomes with $75,000 or more income (4.5 percent) is slightly higher than the Louisiana average of 4 percent, yet is significantly lower than the U.S. (8.7 percent) average.

According to the demographic data prepared by Equifax Marketing Decision Systems, the 1990 estimated average household income for all U.S. households was $36,474. In

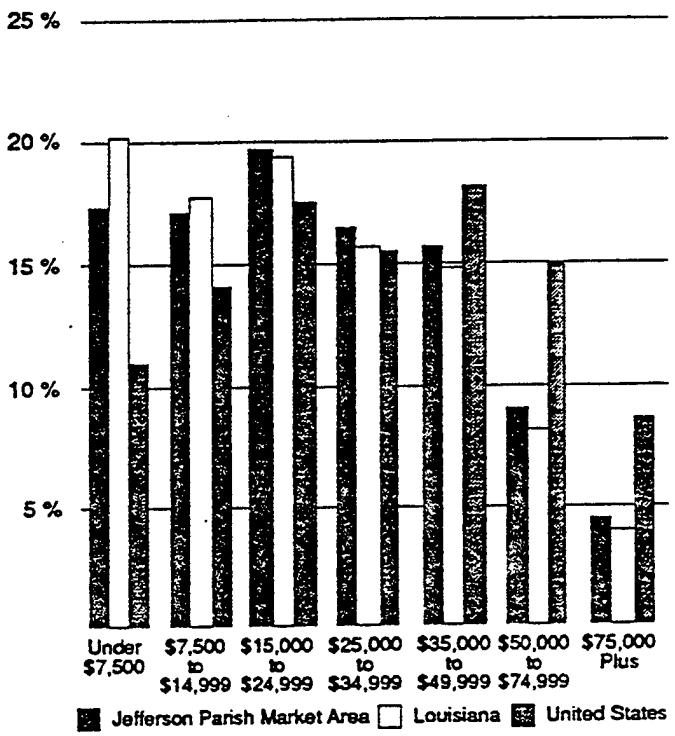
comparison, the average 1990 household income in the defined Jefferson Parish market area was $28,844 which was over $1,500 higher than the Louisiana average income of $27,390, yet is over $7,000 lower than the U.S. average.

Given the foregoing review and comparison of market area household income data, it would be reasonable to assume that Jefferson Parish market area residents, based solely on household income level, should have a tendency to participate in golf at a rate which is considerably higher than the Louisiana population as a whole.

- **Jefferson Parish Market Area Educational Characteristics**

Figure 1.8 (following page) is based upon information obtained from the Equifax Marketing Decision Systems demographic profile report and illustrates the level of education that has been reached by residents within the Jefferson Parish market area as compared to similar educational attainment data for U.S. and Louisiana residents.

PERCENT OF HOUSEHOLDS...by Household Income



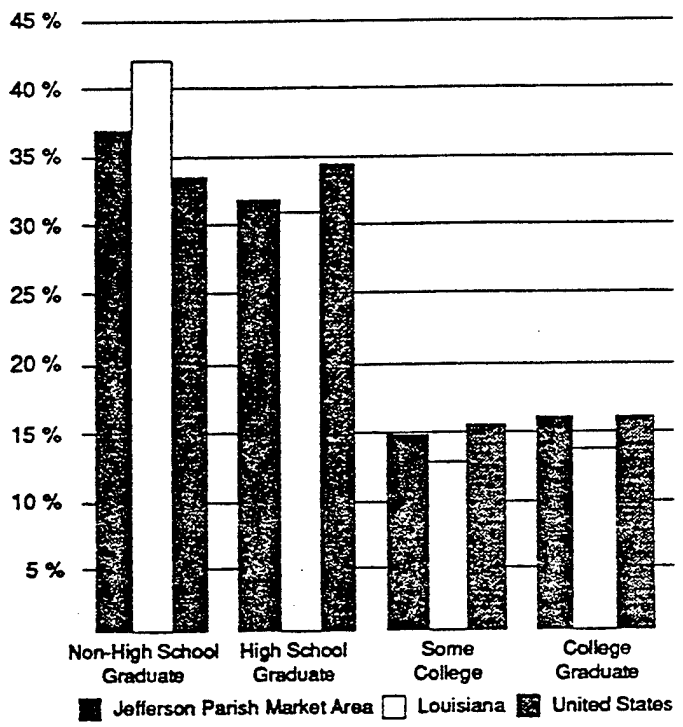
Income Group	Jefferson Parish Market Area	State of Louisiana	United States
Under $7,500	17.4%	20.2%	11.0%
$7,500 to $14,999	17.1%	17.8%	14.1%
$15,000 to $24,999	19.7%	19.5%	17.5%
$25,000 to $34,999	16.5%	15.7%	15.5%
$35,000 to $49,999	15.8%	14.8%	18.2%
$50,000 to $74,999	9.1%	8.2%	14.9%
$75,000 Plus	4.5%	4.0%	8.7%
Average HH Income	$28,844	$27,390	$36,474

FIGURE 1.7 Source: Golf Resource Associates; Equifax Decision Systems, Inc.

The data in Figure 1.8 indicates that post-high school education among market area residents—those segments in which participation in golf is typically the greatest—is significantly higher than the Louisiana average, and nearly equal to the U.S. average.

The chart illustrates that the percentage of market area residents who have attended college (31%) significantly exceeds the norm for Louisiana (26.7%) as a whole.

The highest incidence of participation category, the college graduate, represents 16.2 percent of the market area's population while nearly 14 percent of Louisiana residents, 25 years of age and older, are reported to have college degrees. In comparison to the market area, an equal percentage of the nation's population (16.2 percent) are college graduates.



Education Group	Jefferson Parish Market Area	State of Louisiana	United States
Non-High School Grad.	37.1%	42.3%	33.5%
High School Graduate	32.0%	30.9%	34.6%
Some College	14.8%	12.8%	15.7%
College Graduate	16.2%	13.9%	16.2%

FIGURE 1.8 Source: Golf Resource Associates; Equifax Decision Systems, Inc.

Through the foregoing comparison of educational attainment by market area, Louisiana, and U.S. residents, it is reasonable to assume, on the basis of the level of education attained, that the resident population within the Jefferson Parish market area should demonstrate a tendency to participate in golf at a rate that is significantly higher than that of the Louisiana population as a whole.

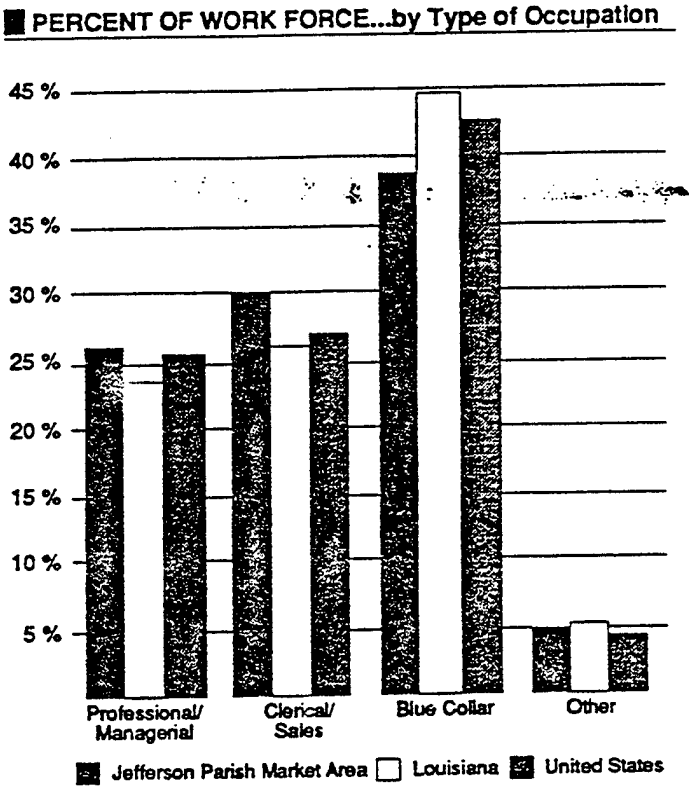
• Jefferson Parish Market Area Occupational Characteristics

As previously discussed, the occupational characteristics of a population are highly indicative of the level of golf participation. Figure 1.9 (following page) is based upon occupational employment data supplied by Equifax Marketing Decision Systems, Inc., and illustrates the Jefferson Parish market area resident work force by type of occupation in comparison to employment within Louisiana, and the nation as a whole.

As the graph and table in Figure 1.9 illustrate, over 26 percent of the residents in the market area work force tend to be employed in professional or managerial positions—the type of employment which generally produces the highest incidence of participation in golf.

In comparison, nearly 24 percent of Louisiana residents, and 25.7 percent of the nation's work force, fall within the definition of the professional and managerial employment categories.

Market area employment in clerical and sales positions (30%) the next highest category of golf participation by employment type, is also significantly higher than the Louisiana (24.4%) and the U.S. (27.3%) averages for this employment category.



Type of Occupation	Jefferson Parish Market Area	State of Louisiana	United States
Professional/Managerial	26.2%	23.8%	25.7%
Clerical/Sales	30.0%	26.2%	27.3%
Blue Collar	38.9%	44.6%	42.5%
Other	5.0%	5.4%	4.5%

FIGURE 1.9 Source: Golf Resource Associates; Equitax Decision Systems, Inc.

In total, it is estimated that over 56 percent of the residents in the Jefferson Parish market area are employed in the two employment categories—professional/managerial and clerical/sales—which typically produce those who demonstrate the greatest tendency to participate in golf. In comparison, it is estimated that 50 percent of the Louisiana, and 53 percent of the nation's work force are employed in these occupational categories.

The foregoing review, concerning the correlation of employment to golf participation among Jefferson Parish market area residents, indicates that the incidence of participation in golf among the area's residents, based solely on the type of employment in

which they are engaged, is likely to be significantly higher than that of the typical Louisiana resident.

• **Summary**

A review of the foregoing market area demographic and socioeconomic characteristics, and relating statewide comparative data, indicates that it can be reasonably assumed that the potential incidence of golf participation among residents of the defined Jefferson Parish market area, given typical levels of public golf accessibility, is likely to be considerably higher than the average rate of golf participation among Louisiana residents as a whole.

☐ **Jefferson Parish Market Area Golf Participation Potential**

Once the probable tendency of the local population to participate in golf has been determined, as has been accomplished in the foregoing discussion concerning the characteristics of those who reside within the Jefferson Parish market area, it is necessary to further review resident golf participation in terms of the potential demand that could be created by market area residents. The following discussion provides a brief review of market area population size and growth trends and interprets this data in terms of potential golf participation among the market area's resident population.

• **Size of Resident Population**

According to population data generated by Equifax Marketing Decision Systems, Inc., recently released 1990 Census data reveals that the Jefferson Parish market area population currently (1990) equals 1,058,362 residents, which represents an decrease of approximately 60,000 residents since the 1980 Census Bureau estimate.

Given current growth trends, EMDS, Inc. has projected that the resident population within the Jefferson Parish market area, as defined by GRA, will fall to approximately 1,046,710 residents by 1995. Figure 2.0 (following page) is based upon EMDS, Inc. estimates and projections and illustrates past (1970 and 1980), current (1990), and anticipated (1995) population growth within the defined Jefferson Parish market area.

Figure 2.0 also illustrates the current and projected growth of the Jefferson Parish market area in comparison to the rate of growth for Louisiana as a whole. As the population data indicates, both the market area (10.0%) and Louisiana (15.5%) experienced an increase in population during the 1970 to 1980 period.

Based on current estimates and projections, the growth rate within the defined market area fell well below the Louisiana rate during the 1980 to 1990 period, and it is projected to continue to decline at a greater rate than Louisiana as a whole through 1995. It is

projected that the defined market area will experience an estimated 6.4 percent decline in population during the 1980 to 1995 period while, in turn, it is projected that the Louisiana population will increase by nearly 1.4 percent in the same period.

• **Resident Golf Participation**

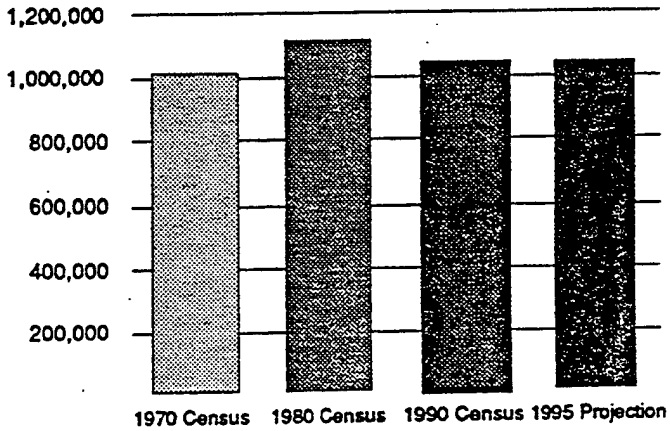
During 1985, Market Facts, in cooperation with the National Golf Foundation, completed what was then considered to be the most extensive golf participation survey ever conducted.

The survey, *Golf Participation in the United States*, indicated that the incidence of participation in golf among U.S. residents, five-years-old and older, was approximately 8.0 percent.

Repetition of the survey in subsequent years has revealed consistent increases in participation from the initial 8.0 percent to the most recent findings (published June, 1990) which indicate that the rate of participation in golf within the nation's age-five and older population now equals 10.8 percent.

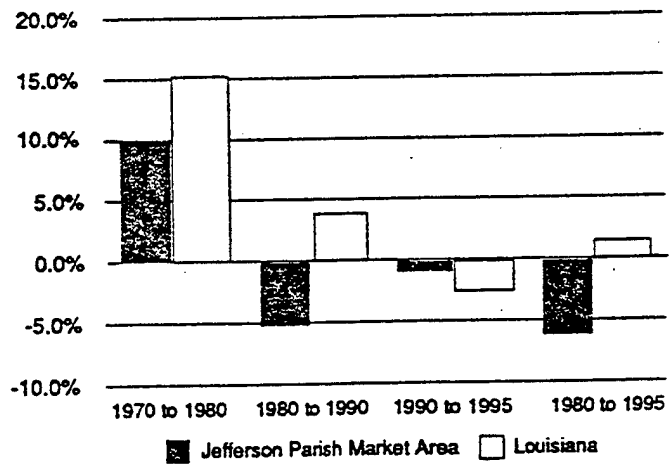
POPULATION GROWTH..Jefferson Parish, LA Market Area

...Number of Residents



Year/Basis	Jefferson Parish Market Area
1970 Census	1,016,080
1980 Census	1,117,980
1990 Census	1,058,362
1995 Projection	1,046,710

...Percent of Change



Selected Periods	Jefferson Parish MA	Louisiana
1970 to 1980	10.0%	15.5%
1980 to 1990	-5.3%	4.0%
1990 to 1995	-1.1%	-2.5%
1980 to 1995	-6.4%	1.4%

FIGURE 2.0 Source: Golf Resource Associates; Equitax Decision Systems, Inc.

On a state-by-state basis, the most recent survey found that golf participation was greatest among the residents of Minnesota (17.6%), and lowest in Mississippi, where only 4.4 percent of the residents played the game. According to the Market Facts' survey, the average rate of participation among the five-year and older resident population in Louisiana is estimated to be 5.4 percent. The estimated rate is the second lowest rate of statewide golf participation in the United States behind only Mississippi.

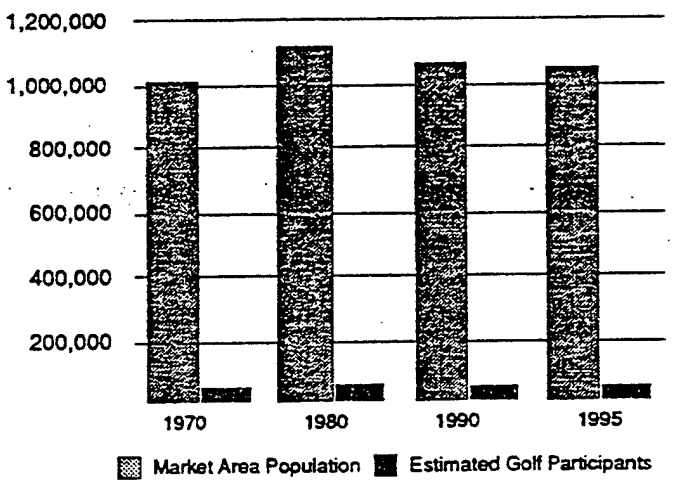
As previously expressed, based on a comprehensive review of the socioeconomic characteristics of the population in the defined Jefferson Parish market area, GRA estimates that the potential incidence of participation in golf among market area residents is significantly higher than the rate of participation among Louisiana residents as a whole. For the purposes of market area golf participation estimates and projections within this report, it is assumed that the rate of golf participation among Jefferson Parish market area residents is equal to 6.0 percent of those residents who are of age-five or older.

The resident golf participation estimates included in Figure 2.1 are based upon the foregoing estimated rate of potential golf participation among Jefferson Parish market area residents, and depict the estimated potential number of resident golf participants as per 1970 and 1980 Census Bureau estimates, and 1990 and 1995 population estimates and projections generated by Equifax Marketing Decision Systems.

As the table in Figure 2.1 indicates, the Jefferson Parish market area currently contains a potential of over 58,000 residents who may participate, either actively or casually, in the game of golf. By 1995, as-

ESTIMATED RESIDENT GOLF PARTICIPATION

Estimated Resident Golf Participants: Jefferson Parish Mkt. Area



Year/Basis	Estimated Resident Population	Estimated Golf Participants
1970 Census	1,016,080	56,082
1980 Census	1,117,980	61,706
1990 Estimate	1,058,362	58,415
1995 Projection	1,046,710	57,772

FIGURE 2.1 Source: Golf Resource Associates; Equifax Decision Systems, Inc.

suming the golf participation rate remains static, the market area could potentially contain slightly less than 58,000 resident golf participants.

☐ **Jefferson Parish Market Area Public Golf Demand Potential**

Determining public golf demand potential, requires further refinement of the foregoing participation estimates and expression of these estimates in terms of the potential number of public golf facility users which may live in the defined market area. Public golf market demand potential is most easily expressed in terms of the total number of rounds of play that could potentially be generated within the market area in comparison to the number of rounds of play that are, or will be, accommodated by existing or planned public golf facilities.

• **Resident Public Golf Demand Potential**

Through the research efforts of organizations such as Market Facts and the National Golf Foundation, relatively current information pertaining to how often golfers participate and where they most often play is available. Market Facts, for instance, has found that although public facility golfers account for approximately 77 percent of the nation's total golf participant population, that the public to private golfer ratio can vary significantly according to U.S. region and on a state-by-state basis.

On a regional basis private golf is strongest in the South, while public golf accessibility and participation is more prevalent in the North Central region of the nation. At the state level there is a wide variance in the degree of influence exerted by public facility and private club golf participants. In Wisconsin, for example, approximately 88 percent of the golf population participates at public golf facilities, while in Georgia only 49 percent of all golfers participate at public golf facilities. In Louisiana, it is estimated that 51 percent of the state's golfers participate at public golf facilities.

In general, most researchers categorize golf participants as either active or casual, depending on their frequency of play. Since it is the active golfer who is usually responsible for the preponderance of play at any given golf facility (the Market Facts survey indicated that on a nationwide basis, 22% of the golf par-

ESTIMATED FREQUENCY OF GOLF PARTICIPATION

Level of Golf Participation	Annual Frequency of Participation	PERCENT OF PARTICIPANTS United States	W. South Central Region Average
Infrequent	1 - 2 Rounds	21.0%	21.5%
Occasional	3 -7 Rounds	30.1%	28.9%
Average	8 - 24 Rounds	26.6%	24.1%
Frequent	25 or More Rounds	22.3%	25.5%
Mean Annual Play Frequency (Rounds)		19.2	25.4

FIGURE 2.2 Source: Golf Resource Associates; Market Facts, Inc.

ticipants account for approximately 72% of all rounds played), it is important when estimating the potential number of rounds which may be generated within a market area, that consideration be given to the number of active and casual golfers and how often they participate.

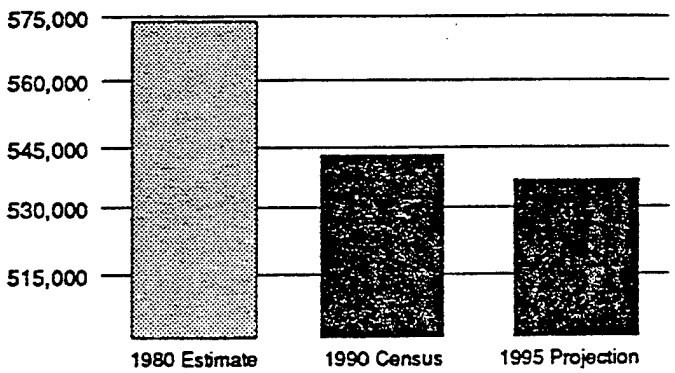
Figure 2.2 (previous page) identifies golf participants by four major levels of participation involvement and illustrates the overall findings of the Market Facts survey concerning the frequency of play for golf participants in the United States and the average participation involvement between the nation's West South Central region.

The estimated play frequency of the typical Louisiana (24.5 rounds) golf participant is nearly one round lower than the region (25.4 rounds) average, yet is over five rounds higher than the U.S. (19.2 rounds) average.

Based upon the foregoing review of market area socioeconomic characteristics, and considering the age structure of market area

ESTIMATED ROUNDS OF PLAY POTENTIAL

Jefferson Parish Market Area Public Golf Participation



Year and Frequency	Estimated Number of Golfers	Estimated Private Golfers	Estimated Public Golfers	Estimated Frequency of Play	Potential Rounds of Public Play
1980:					
Infrequent	13,267	6,501	6,766	2	13,532
Occasional	17,833	8,738	9,095	6	54,570
Average	14,871	7,287	7,584	18	136,512
Frequent	15,735	7,710	8,025	46	369,150
Total	61,706	30,236	31,470		573,764
1990:					
Infrequent	12,559	6,154	6,405	2	12,810
Occasional	16,882	8,272	8,610	6	51,660
Average	14,078	6,898	7,180	18	129,240
Frequent	14,896	7,299	7,597	46	349,462
Total	58,415	28,623	29,792		543,172
1995:					
Infrequent	12,421	6,086	6,335	2	12,670
Occasional	16,696	8,181	8,515	6	51,090
Average	13,923	6,822	7,101	18	127,818
Frequent	14,732	7,219	7,513	46	345,598
Total	57,772	28,308	29,464		537,176

Note: The estimated frequency of play is based on an average frequency rate of 24.9 annual rounds of play factored to an average of 22.2 rounds per typical levels of public golf participant frequency. "Estimated Market Area Participants" are based on a market area participation rate of 6 percent. "Estimated Private Participants" are equal to approximately 49 percent of the golf population. "Estimated Public Participants" are equal to approximately 51 percent of the estimated golf population. "Potential Rounds of Public Golf" are equal to the estimated potential number of public golf participants (X) the corresponding estimated frequency of play category. Small errors in totals are possible and are the result of rounding an extensive number of calculations. These errors have an insignificant impact on total market area estimates and projections and should be disregarded.

FIGURE 2.3 Source: Golf Resource Associates; Equifax Decision Systems, Inc.

residents (the nation's most frequent players fall into the 55 years and older age categories and represent 18% of the Jefferson Parish market area as compared to 17.9% of the Louisiana population), the average frequency of play for all market area golf participants is estimated to be 24.9 annual rounds.

Figure 2.3 (previous page) provides further refinement of the Jefferson Parish market area resident golf population in terms of the existing and projected estimated number of public and private golf participants. The table in Figure 2.3 also indicates, based upon the estimated number of annual rounds of play the typical Jefferson Parish market area golf participant is likely to generate, the number of rounds of play which could potentially be generated by the market area's public golf participants.

The public rounds of play frequency has been factored to reflect Market Facts' findings which indicate that public golf participants tend to participate somewhat less frequently than their private club counterparts. The estimated and projected market area rounds of play potential is not based upon the existing or projected availability of public golf facilities, but solely on those participation level and frequency of play factors which have been discussed.

As the table in Figure 2.3 indicates, based on Louisiana public to private golfer ratios, it is estimated that the Jefferson Parish market area, in 1990, could have contained a potential of nearly 30,000 public golf participants. Based on market area population growth data, it is anticipated that there will be approximately 300 less resident public golf participants by 1995. And, based on available data, it is estimated that the market area's resident public golf population, given adequate public golf facility accessibility, could potentially generate nearly 550,000 rounds of play by 1995.

- **Visitor Public Golf Demand Potential**

Although it is always difficult to accurately measure the potential impact of visitor golf participation within a specific market area, if estimates pertaining to the potential number of visiting golfers are based upon reasonably accurate estimates of the total visitor population and are factored by conservative estimates of probable golf participation as related to reliable research data, it is possible to make reasonable assumptions concerning the probable number of visitors who may participate in golf during their stay within the market area.

Estimates pertaining to potential market area visitor golf participation are based upon visitor population estimates provided by various sources including, the Greater New Orleans Tourist and Convention Commission and the Greater New Orleans Hotel/Motel Association. These sources indicated that the Greater New Orleans area annually accommodates 6 million visitors.

If U.S. averages for the age-five and older (92.5%) population, the rate of golf participation (10.8%), and frequent golfer (22.3%) categories are applied to develop a golfer profile among this national visitor/tourist/convention population of 6 million, it could reasonably be estimated that nearly 135,000 additional golfers could be visiting the defined market area on an annual basis. If one-half of these potential golfers were to play one round of golf during their stay in the area, nearly 70,000 additional rounds of play could be added to the unserved market demand potential.

It should be noted that GRA estimates of potential golf participation among the visitor/tourist/convention population reflects a somewhat conservative perspective. While this population segment represents some 6 million potential golfers, GRA estimates that only slightly more than one percent will play a round of golf during their stay in the area. If the facility is properly marketed, this segment of the potential golf market could significantly affect the viability of the proposed facility, and if the Jefferson Parish municipal golf facility were to be developed, this opportunity should be fully exploited.

Unserved Market Demand

To determine the extent of unserved market demand potential—the annual number of public golf rounds of play which should be available for absorption by the proposed Jefferson Parish golf facility—it is necessary to determine the level of public golf demand that is, or will be, accommodated by the market area's existing and, if any, planned public golf facilities.

The following discussion includes a review of those golf facilities which currently serve the defined Jefferson Parish market area, and provides a review and evaluation of the proposed facility's market opportunities in terms of the potential availability of surplus, or unserved market demand.

Jefferson Parish Market Area Golf Facilities

To ascertain current golf facility operating characteristics and conditions, including actual or estimated levels of play accommodated, on-site interviews were conducted with personnel at public and private golf facilities within and beyond the defined Jefferson Parish market area.

Figure 2.4 (following page) illustrates the approximate location of golf facilities visited by GRA and the approximate location of other public or private golf facilities in or near the defined market area. In conducting the on-site research for the proposed Jefferson Parish, GRA did not find evidence of planning for the development of any additional public golf facilities within the defined market area.

Jefferson Parish Market Area Golf Facilities • Approximate Location

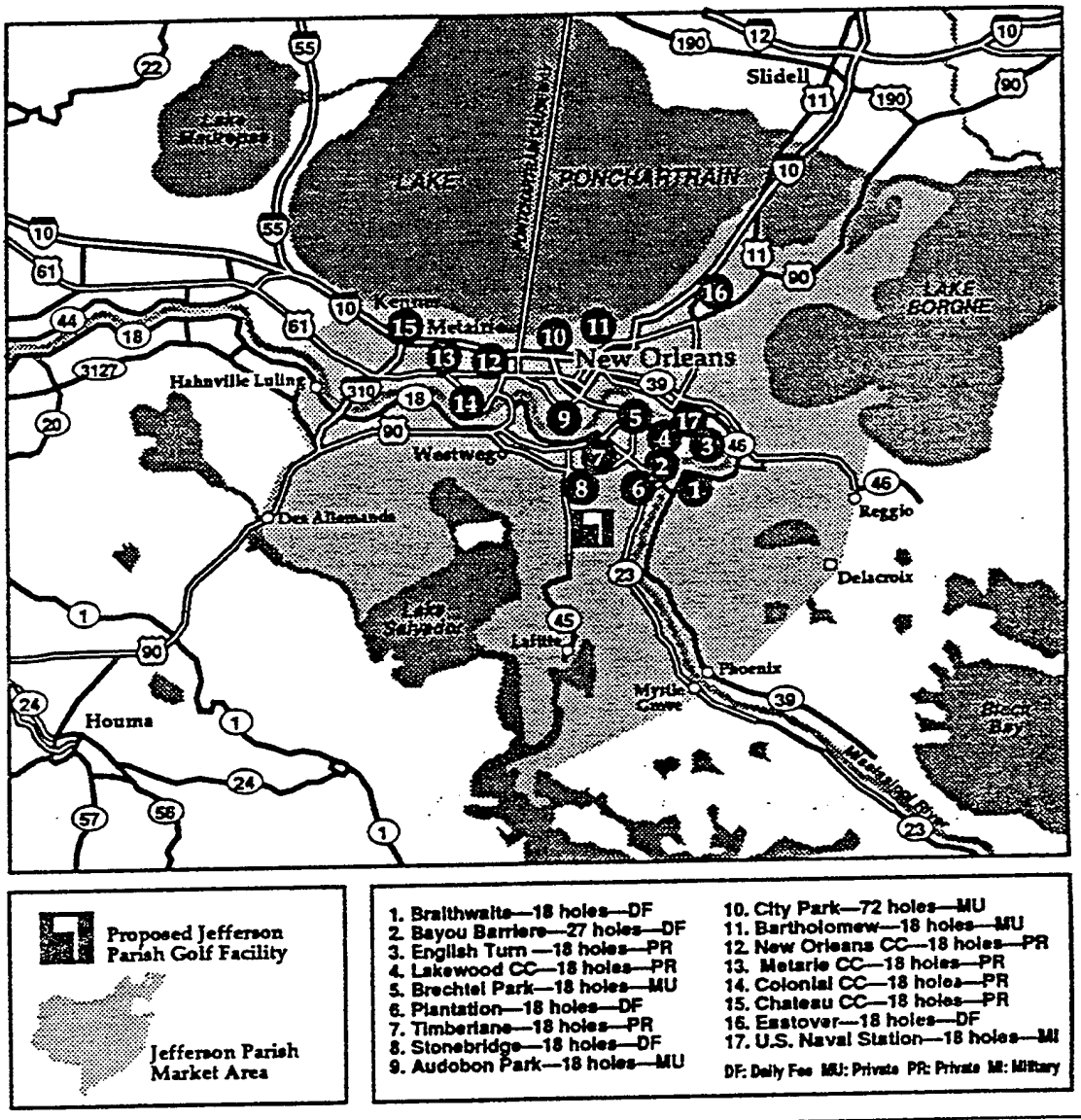


FIGURE 2.4

Source: Golf Resource Associates, Inc.

A review of selected market area golf facilities, including fee structures and other operating characteristics follows. Although golf facility information contained within this report is based upon data which was made available to GRA during the on-site facility interview process, it should be noted that it is not uncommon for golf facilities to alter fee structures or change operating policies. As a result, it is not possible to pro-

vide total assurance that the future operating characteristics of the facilities will be as reflected in the following review of market area facilities.

Audubon Park GC
Walnut Street
New Orleans, Louisiana

Type of Facility: 18-hole, regulation length, municipal
Actual Annual Rounds of Play: 32,000
Fee Structure:

Green Fees	
Weekday	$7.00
Weekday-Junior/Senior	5.00
Weekend	10.00
Weekend-Junior/Senior	8.00
Annual Passes	
Individual	$150.00
Senior/Junior	75.00
Golf Car Rentals	
18 holes	$14.00

Comments:

Audubon Park is a short, regulation length municipal golf facility located in heavily populated New Orleans, west of the Central Business District..

The quality of the golf course is adequate, although the two story clubhouse needs esthetic improvements.

Entrance to the facility is through an older neighborhood on the west side of the park. The parking lot is small and inadequate for this size of a golf operation. The facility is owned and operated by the City of New Orleans, yet records pertaining to rounds of play and operating performance were not readily available at the time of the GRA visit.

City Park Municipal Golf Course Complex
City Park
New Orleans, Louisiana

Type of Facility: 54-hole, regulation length, 18-hole, executive length, municipal
Estimated Annual Rounds of Play: 210,000
Fee Structure:

Green Fees—Weekdays	
Non-Resident-Championship	$12.00
Resident-Championship	10.00
Non-Resident-Wisner	11.00
Resident-Wisner	8.00
Non-Resident-Lakeside	11.00
Resident-Lakeside	8.00
Non-Resident-Little	8.00
Resident-Little	7.00
Green Fees—Weekends and Holidays	
Non-Resident-Championship	$15.00
Resident-Championship	12.00
Non-Resident-Wisner	14.00
Resident-Wisner	10.00
Non-Resident-Lakeside	14.00
Resident-Lakeside	10.00
Non-Resident-Little	12.00
Resident-Little	9.00
Twilight (Wisner, Lakeside, and Little/Weekdays)	5.00
Twilight (Championship/Weekdays)	6.00
Twilight (Wisner, Lakeside, and Little/Weekends)	6.50
Twilight (Championship/Weekends)	7.00
Other Various Restrictions and Offers Apply	
Yearly Pass Play	
Individual	$500.00
Semi-Annual	300.00
Seniors/Ladies	465.00
Monthly Pass Play	
Individual	$60.00
Senior	35.00
Lakeside/Little Courses Only	40.00
Students (Age 25 and under/Lakeside/Little Courses Only)	25.00

continued to following page

City Park Municipal Golf Course Complex Fee Schedule...continued

Golf Car Rental	
9 holes	$9.00
18 holes	15.00
27 holes	24.00
36 holes	30.00

Comments:

City Park is a four golf course complex. A local management company owns and operates the golf shops and collects golf fees for the state. Three courses are operated out of the main clubhouse while the driving range complex has a separate control center across the street from the main clubhouse.

A small golf shop is set up in a park administrative building to control the fourth golf course which is an executive length golf course. Due to very low green fees, play at City Park is heavy virtually year round.

There has been discussion recently concerning the donation of funds for a substantial upgrade to City Park's best facility, The Championship Course. Specific details of this plan were not available.

The four courses at City Park benefit from the central location which is convenient and accessible to golfers in the metropolitan area. Affordable daily green fees, as well as annual passes make this the busiest golf facility in the area. Prime playing times are weekend mornings and weekdays after 3 P.M. The facility operators are quite actively involved with hotel, tourist, and convention planners to coordinate convention and corporate golf tournaments and outings.

Bayou Barriere
Belle Chasse, Louisiana

Type of Facility: 27-hole, regulation length, daily fee
Estimated Annual Rounds of Play: 55,000
Fee Structure:

Green Fees:	
18 holes/Monday	$13.00
18 holes/Tuesday-Friday	16.00
18 holes/Weekends	22.00
Twilight/Weekdays	13.00
Twilight/Weekends	16.00
Golf Car Rental	
18 holes	$18.00

Comments:

Bayou Barriere is a 27-hole facility that was operated as a private non-equity club until it was purchased by the Jim Colbert Golf Management Company approximately four years ago. Colbert has since sold the operation, in part due to unsatisfactory operating results.

The new owners are in the process of constructing a new clubhouse which should be completed by Fall, 1991. Access to the existing clubhouse is poor, as golfers currently must travel under a bridge, over a railroad track, and then travel on a gravel road to an unpaved parking lot. Currently there are no plans to improve the course access roads or parking.

Brechtel Memorial Park
New Orleans, Louisiana

Type of Facility: 18-hole, regulation length, municipal
Actual Annual Rounds of Play: 44,500
Fee Schedule;

Green Fees:	
Weekdays (All Day)	$5.75
Weekdays/Seniors-Juniors	4.25
Weekends (All Day)	7.00
Annual Fees	
Individual	$400.00
Golf Car Rentals	
18 holes	$16.00

Comments:

Brechtel Park is a reasonably good quality municipal golf course which has, like all other municipal golf facilities in the New Orleans area, a fee structure that is extremely low. The facility is located on the West Bank, and enjoys good access and parking. The clubhouse is quite small, yet is very functional.

Plantation Golf and Country Club
Behrman Highway
Gretna, Louisiana

Type of Facility: 18-hole, regulation length, daily fee
Estimated Annual Rounds of Play: 24,000
Fee Structure:

Green Fees:	
Weekends	$6.00
Weekdays	5.00
Golf Car Rentals	
18 holes/Weekdays	$11.00
18 holes/Weekends	13.00

Comments:

Plantation Golf and Country Club is a short, regulation length facility also located on the West Bank. Despite it's excellent location, this facility is not one of the better public golf facilities in the immediate New Orleans area.

The course was owned until recently by American Golf Corporation. The current owners, unlike their predecessors, have been promoting the facility for outings. According to management staff, weekend outing play has driven away some of the regular green fee players.

• Facility Operating Characteristics

Research by the PGA of America and the National Golf Foundation has indicated that the nation's typical 18-hole municipal golf facility accommodates approximately 50,000 annual rounds of play. Additional information obtained from PGA/NGF research indicates that 18-hole daily fee and 18-hole municipal golf facilities in the nation's West South Central Region, on average, also tend to accommodate approximately 50,000 annual rounds of play.

GRA investigation of publicly accessible golf facilities in the Jefferson Parish market area, indicates that a typical 18-hole municipal golf facility, given average weather conditions, should accommodate approximately 45,000 to 50,000 rounds of play during a typical operating year of approximately 310 to 340 playable days.

☐ Unserved Demand Potential

As previously discussed, GRA estimates that the potential size of the current Jefferson Parish market area, in terms of potential resident public golf play, could exceed 540,000 annual rounds of play. The projected 1995 potential resident public golf play within the market area is estimated to fall below the 540,000 annual round level.

An additional segment of market demand potential which must be considered, and which is likely to have an effect on public golf demand, is the private golf participant who will occasionally travel to a public golf facility to play a round of golf. Because this segment of market demand potential represents a significant share of the overall level of public golf demand potential (537,176 rounds of play), its impact on play is very important to gaining an understanding of this golf market.

Figure 2.5 (following page) depicts the estimated public rounds of play potential generated by the resident population within the Jefferson Parish market area in 1990 and 1995; rounds of play which could be contributed by the visitor/tourists populations; and, the rounds of play that may be derived from private golfers who may occasionally play at a public golf facility. In addition, the table depicts the existing and projected number of rounds of play which are, or should be, absorbed by existing and planned market area golf facilities, and shows, in terms of unserved public golf demand, the extent of market potential that should be available for absorption by the proposed Jefferson Parish golf facility.

• Summary

The market potential for a public golf facility in the Jefferson Parish market area, based on the level of support which might be derived from the estimated existing (1990) and future (1995) resident public golf market demand potential, only slightly

exceeds (53,020 current and 46,646 projected) the annual rounds of play that would normally be accommodated (45,000 to 50,000 rounds) by a market area 18-hole public golf facility. This would seem to indicate that the resident public golf population is currently well served by existing market area public golf facilities.

There are, however, various other golf participation segments which must also be considered. A segment of golfer whose potential contribution to the overall market demand potential which has not been quantified is the "unaccommodated" private golf participant. Typically, this golf participant is classified as a private golfer, but has elected not to participate at a private golf facility for various reasons.

Because of the nearly equal division of public (51%) to private (49%) golfers in Louisiana, it is entirely possible that this segment of market demand potential could be much more substantial than in other states and other golf markets. Although difficult to quanti-

ESTIMATED UNSERVED MARKET POTENTIAL

	Estimated Demand Accommodated	Estimated Market Demand Potential
1990:		
Resident Public Golf Demand Potential:		543,172
Estimated Additional Play From Visitor/Tourists:		70,000
Estimated Additional Private Golfer Crossover Play:		34,348
Total Public Golf Demand Potential		647,520
Reported or GRA estimates of rounds of public golf play at existing market area golf facilities:		
Braithwaite	40,000	
Bayou Barriere	55,000	
Brechtel Park	44,500	
Plantation	35,000	
Stonebridge	30,000	
Audobon Park	32,000	
City Park	210,000	
Bartholomew	40,000	
Eastover	38,000	
Total Estimated Public Market Demand Accommodated:		-524,500
Total Estimated 1990 Public Golf Unserved Market Demand Potential		123,020

	Estimated Demand Accommodated	Estimated Market Demand Potential
1995:		
Resident Public Golf Demand Potential:		537,176
Estimated Additional Play From Visitor/Tourists:		70,000
Estimated Additional Private Golfer Crossover Play:		33,970
Total Public Golf Demand Potential		641,146
Reported or GRA estimates of rounds of public golf play at existing market area golf facilities:	524,500	524,500
Total Estimated 1995 Public Golf Unserved Market Demand Potential		116,646

Note: GRA estimates of rounds played are provided when actual rounds of play could not be determined. (A) Although GRA has typically found actual rounds of play data to be readily available at most municipal golf facilities, research of public golf facilities in the New Orleans area did not reveal the presence of such data.

FIGURE 2.5 Source: Golf Resource Associates; Market Facts, Inc.

fy, it is likely that many of the market area's potential golf participants who have been identified within this report as "private" golfers could be included within the public golf market demand potential. This type of golfer will most likely require facilities and amenities that far exceed the quality of facilities found at most of the existing New Orleans municipal golf facilities.

In addition, it is important that the tourist/visitor/convention golf participation segment be considered. According to local sources, this industry has always thrived in the New Orleans area, and various local tourism officials responded favorably to questions concerning the use of golf as a marketing tool to encourage a visit to the New Orleans area. It is important to note, however, that New Orleans is not viewed as a resort community and is not promoted as such.

While visitors do not come to the area for the express purpose of playing golf, it is one of the amenities most often listed by convention/meeting planners when inquiring about a possible convention site. The presence of a municipal golf facility should assist in attracting additional business travelers to Jefferson Parish. This segment, in similarity to the desires of the unaccommodated private golf segment, is also best served through the development of a quality municipal golf facility.

While the potential of the convention/tourist business is significant, it is not generally advisable to develop a municipal golf facility solely on the basis of potential rounds that could be derived from visitor populations. A Jefferson Parish municipal golf facility should primarily serve as a recreational amenity for residents of the Parish. It would also be available to the tourist, convention, and business traveler market as an added incentive to utilize the convention and motel/hotel facilities of Jefferson Parish. Properly promoted, the proposed Jefferson Parish municipal golf facility could possibly attract regional, state, and national golf tournament events as well.

Given the development of a publicly accessible golf facility of equal or greater quality to the area's existing public golf facilities, it is reasonable to assume that the proposed Jefferson Parish facility would capture a portion of the rounds of play that are now accommodated by existing market area facilities. This is particularly true in the early years of operation when most golfers, who tend to be nomadic by nature, will experiment with a new golf facility. Although this may have a negative short-term impact on these golf facilities, the long-term benefits that are typically associated with new public golf facilities in the market could be significant.

As the accessibility to public golf within the Jefferson Parish market area expands, so too should the rate of public golf participation among market area residents. Research by Market Facts' indicates that there is a direct correlation between public golf accessi-

bility and the incidence of participation in golf. The firm's research has shown that as local public golf accessibility expands, the expansion is generally followed by a similar expansion in the resident public golf participation rate.

Although the success of any golf facility is always highly dependent upon the qualifications, experience, and effectiveness of the facility's on-site management, given the proposed facility's type, size, and anticipated quality, it is the opinion of Golf Resource Associates that the actual rounds of play accommodated by the proposed facility could equal 45,000 to 50,000—an annual level of play that should be typical of a well-managed and, in terms of user fees, affordable 18-hole municipal golf facility in the Jefferson Parish market area.

In summary, it is the opinion of Golf Resource Associates that the overall level of demand for public golf in the Jefferson Parish market area, is sufficient to warrant further exploration of the feasibility of developing the proposed Jefferson Parish municipal golf facility. It is important, however, given the extremely competitive fee structure at the area's existing municipal facilities, that the long term economic viability of the project be fully explored.

Appendix

[redacted] Jefferson Parish Market Area Population Data

[redacted] State of Louisiana Population Data

[redacted] United States Population Data

Jefferson Parish Market Area Population Data

Page 1 through 7

Source: Equifax Marketing Decision Systems, Inc.—1991

ACCT #: 135009 06/26/91

POP-FACTS: PRELIMINARY DATA REPORT
(CENSUS '90 POPULATION COUNTS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

TRADE AREA
JEFFERSON PARISH, LA

SITE: 302053
COORD:29:50.10 90:02.35

DESCRIPTION	TOTALS
1990 POPULATION & HOUSING UNITS	
POPULATION	1058362
HOUSING UNITS	451538
PERSONS PER HOUSING UNIT	2.34
1990 POP RACE/HISP SUMMARY	1058362
WHITE (NON-HISP)	55.77%
BLACK (NON-HISP)	37.44%
HISPANICS	4.62%
OTHER (NON-HISP)	2.17%
1990 POP 18+ RACE/HISP SUMMARY	768816
WHITE (NON-HISP)	59.91%
BLACK (NON-HISP)	33.51%
HISPANIC	4.65%
OTHER (NON-HISP)	1.93%
1990 POP BY RACE	1058362
WHITE	58.85%
BLACK	37.77%
AMERICAN INDIAN	0.28%
ASIAN & PACIFIC ISLANDER	1.94%
OTHER RACES	1.15%
1990 POP 18+ BY RACE	768816
WHITE	63.06%
BLACK	33.83%
AMERICAN INDIAN	0.27%
ASIAN & PACIFIC ISLANDER	1.70%
OTHER RACES	1.13%
1990 HISPANIC POP BY RACE	48884
WHITE	66.58%
BLACK	7.33%
AMERICAN INDIAN	0.52%
ASIAN & PACIFIC ISLANDER	2.23%
OTHER RACES	23.34%
1990 HISPANIC POP 18+ BY RACE	35734
WHITE	67.81%
BLACK	6.81%
AMERICAN INDIAN	0.46%
ASIAN & PACIFIC ISLANDER	1.87%
OTHER RACES	23.06%

ACCT #: 135009 06/26/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

TRADE AREA
JEFFERSON PARISH, LA

SITE: 302053
COORD:29:50.10 90:02.35

DESCRIPTION	TOTALS
POPULATION	
1995 PROJECTION	1,046,710
1990 ESTIMATE	1,100,650
1980 CENSUS	1,117,980
1970 CENSUS	1,016,080
GROWTH 70-80	10.03%
HOUSEHOLDS	
1995 PROJECTION	408,396
1990 ESTIMATE	417,361
1980 CENSUS	395,279
1970 CENSUS	309,127
GROWTH 70-80	27.87%
POPULATION BY RACE & SPANISH ORIGIN	1,117,980
WHITE	63.47%
BLACK	34.32%
AMERICAN INDIAN	0.21%
ASIAN & PACIFIC ISLANDER	1.21%
OTHER RACES	0.79%
SPANISH ORIGIN - NEW CATEGORY	4.19%
OCCUPIED UNITS	395,279
OWNER OCCUPIED	52.12%
RENTER OCCUPIED	47.88%
1980 PERSONS PER HOUSEHOLD	2.78
YEAR ROUND UNITS AT ADDRESS	426,306
SINGLE UNITS	73.08%
2 TO 9 UNITS	16.05%
10+ UNITS	9.20%
MOBILE HOME OR TRAILER	1.67%
SINGLE/MULTIPLE UNIT RATIO	2.89
1990 ESTIMATED HOUSEHOLDS BY INCOME	417,361
$75,000 OR MORE	4.54%
$50,000 TO $74,999	9.10%
$35,000 TO $49,999	15.75%
$25,000 TO $34,999	16.48%
$15,000 TO $24,999	19.66%
$7,500 TO $14,999	17.11%
UNDER $7,500	17.36%
1990 ESTIMATED AVERAGE HH INCOME	$28,844
1990 ESTIMATED MEDIAN HH INCOME	$24,040
1990 ESTIMATED PER CAPITA INCOME	$11,022

ACCT #: 135009

06/26/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

TRADE AREA
JEFFERSON PARISH, LA

SITE: 302053
COORD:29:50.10 90:02.35

DESCRIPTION	TOTALS
POPULATION BY SEX	1,117,940
MALE	47.94%
FEMALE	52.06%
POPULATION BY AGE	1,117,940
UNDER 5 YEARS	8.12%
5 TO 9 YEARS	7.88%
10 TO 14 YEARS	8.33%
15 TO 19 YEARS	9.41%
20 TO 24 YEARS	10.03%
25 TO 29 YEARS	9.65%
30 TO 34 YEARS	8.08%
35 TO 44 YEARS	10.87%
45 TO 54 YEARS	9.59%
55 TO 59 YEARS	4.90%
60 TO 64 YEARS	3.80%
65 TO 74 YEARS	5.86%
75+ YEARS	3.47%
MEDIAN AGE	29.11
AVERAGE AGE	32.29
FEMALE POPULATION BY AGE	582,017
UNDER 5 YEARS	7.67%
5 TO 9 YEARS	7.45%
10 TO 14 YEARS	7.95%
15 TO 19 YEARS	9.12%
20 TO 24 YEARS	9.90%
25 TO 29 YEARS	9.40%
30 TO 34 YEARS	7.93%
35 TO 44 YEARS	10.78%
45 TO 54 YEARS	9.70%
55 TO 59 YEARS	4.99%
60 TO 64 YEARS	3.97%
65 TO 74 YEARS	6.66%
75+ YEARS	4.48%
FEMALE MEDIAN AGE	27.58
FEMALE AVERAGE AGE	33.56
POPULATION BY HOUSEHOLD TYPE	1,117,940
FAMILY HOUSEHOLDS	86.38%
NON FAMILY HOUSEHOLDS	12.07%
GROUP QUARTERS	1.55%

ACCT #: 135009

06/26/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

TRADE AREA
JEFFERSON PARISH, LA

SITE: 302053
COORD:29:50.10 90:02.35

DESCRIPTION	TOTALS
HISPANIC POPULATION BY RACE	46,788
WHITE	75.37%
BLACK	9.65%
AMERICAN INDIAN & ASIAN	1.50%
OTHER RACE	13.48%
HISPANIC POPULATION BY TYPE	1,117,980
NOT OF HISPANIC ORIGIN	95.81%
MEXICAN	0.71%
PUERTO RICAN	0.20%
CUBAN	0.51%
OTHER SPANISH	2.77%
MARITAL STATUS PERSONS 15+	845,970
SINGLE	29.21%
MARRIED	51.56%
SEPARATED	4.67%
WIDOWED	8.10%
DIVORCED	6.47%
MARITAL STATUS OF FEMALES 15+	447,761
SINGLE	25.99%
MARRIED	48.58%
SEPARATED	5.32%
WIDOWED	12.76%
DIVORCED	7.35%
PERSONS IN UNIT	395,260
1 PERSON UNITS	25.09%
2 PERSON UNITS	28.05%
3 PERSON UNITS	17.67%
4 PERSON UNITS	14.46%
5 PERSON UNITS	7.69%
6+ PERSON UNITS	7.04%
PERSONS IN RENTER UNITS	188,054
1 PERSON UNITS	36.01%
2 PERSON UNITS	27.06%
3 PERSON UNITS	15.51%
4 PERSON UNITS	10.18%
5 PERSON UNITS	5.37%
6+ PERSON UNITS	5.88%

ACCT #: 135009 06/26/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

TRADE AREA
JEFFERSON PARISH, LA

SITE: 302053
COORD:29:50.10 90:02.35

DESCRIPTION	TOTALS
HOUSEHOLDS BY TYPE	395,260
SINGLE MALE	11.31%
SINGLE FEMALE	13.78%
MARRIED COUPLE	52.67%
OTHER FAMILY - MALE HEAD	3.12%
OTHER FAMILY - FEMALE HEAD	15.10%
NON FAMILY - MALE HEAD	2.57%
NON FAMILY - FEMALE HEAD	1.46%
HOUSEHOLDS WITH CHILDREN 0-18	164,107
MARRIED COUPLE FAMILY	70.16%
OTHER FAMILY - MALE HEAD	3.55%
OTHER FAMILY - FEMALE HEAD	25.54%
NON FAMILY	0.76%
1980 OWNER OCCUPIED PROPERTY VALUES	177,159
UNDER $25,000	9.93%
$25,000 TO $39,999	17.86%
$40,000 TO $49,999	17.49%
$50,000 TO $79,999	35.79%
$80,000 TO $99,999	8.93%
$100,000 TO $149,000	6.22%
$150,000 TO $199,999	2.01%
$200,000+	1.76%
1980 MEDIAN PROPERTY VALUE	$57,325
POPULATION BY URBAN VS RURAL	1,117,980
URBAN	97.95%
RURAL	2.05%
POPULATION ENROLLED IN SCHOOL	318,821
NURSERY SCHOOL	5.33%
KINDERGARTEN & ELEMENTARY (1-8)	52.73%
HIGH SCHOOL (9-12)	23.86%
COLLEGE	18.08%
POPULATION 25+ BY EDUCATION LEVEL	629,416
ELEMENTARY (0-8)	21.32%
SOME HIGH SCHOOL (9-11)	15.78%
HIGH SCHOOL GRADUATE (12)	31.97%
SOME COLLEGE (13-15)	14.77%
COLLEGE GRADUATE (16+)	16.17%

ACCT #: 135009 06/26/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

TRADE AREA SITE: 302053
JEFFERSON PARISH, LA COORD:29:50.10 90:02.35

DESCRIPTION	TOTALS
POPULATION 16+ BY OCCUPATION	468,023
EXECUTIVE AND MANAGERIAL	10.64%
PROFESSIONAL SPECIALTY	12.42%
TECHNICAL SUPPORT	3.10%
SALES	10.99%
ADMINISTRATIVE SUPPORT	18.98%
SERVICE: PRIVATE HOUSEHOLD	0.89%
SERVICE: PROTECTIVE	1.83%
SERVICE: OTHER	11.17%
FARMING FORESTRY & FISHING	0.68%
PRECISION PRODUCTION & CRAFT	13.35%
MACHINE OPERATOR	5.27%
TRANSPORTATION & MATERIAL MOVING	5.69%
LABORERS	5.00%
FEMALES 16+ WITH CHILDREN 0-18	154,201
WORKING WITH CHILD UNDER 6	21.51%
NOT WORKING WITH CHILD UNDER 6	26.17%
WORKING WITH CHILD 6-18 ONLY	30.11%
NOT WORKING WITH CHILD 6-18 ONLY	22.21%
HOUSEHOLDS BY NUMBER OF VEHICLES	395,263
NO VEHICLES	19.93%
1 VEHICLE	38.34%
2 VEHICLES	30.67%
3+ VEHICLES	11.07%
ESTIMATED TOTAL VEHICLES	533,944
POPULATION BY TRAVEL TIME TO WORK	453,859
UNDER 5 MINUTES	2.22%
5 TO 9 MINUTES	8.24%
10 TO 14 MINUTES	12.08%
15 TO 19 MINUTES	16.93%
20 TO 29 MINUTES	22.70%
30 TO 44 MINUTES	23.34%
45 TO 59 MINUTES	7.56%
60+ MINUTES	6.92%
AVERAGE TRAVEL TIME IN MINUTES	25.08
POPULATION BY TRANSPORTATION TO WORK	458,799
DRIVE ALONE	61.75%
CAR POOL	19.99%
PUBLIC TRANSPORTATION	11.44%
WALKED ONLY	4.00%
OTHER MEANS	1.87%
WORKED AT HOME	0.95%

ACCT #: 135009 06/26/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

TRADE AREA
JEFFERSON PARISH, LA

SITE: 302053
COORD:29:50.10 90:02.35

DESCRIPTION	TOTALS
HOUSING UNITS BY YEAR BUILT	426,445
BUILT 1979 TO MARCH 1980	3.13%
BUILT 1975 TO 1978	8.53%
BUILT 1970 TO 1974	13.66%
BUILT 1960 TO 1969	21.65%
BUILT 1950 TO 1959	18.07%
BUILT 1940 TO 1949	12.49%
BUILT 1939 OR EARLIER	22.46%
1980 HOUSEHOLDS BY 1979 INCOMES	395,271
$75,000+	1.59%
$50,000 TO $74,999	3.01%
$35,000 TO $49,999	8.00%
$25,000 TO $34,999	14.74%
$15,000 TO $24,999	24.77%
$ 7,500 TO $14,999	22.50%
UNDER $7,500	25.38%
1979 AVERAGE HOUSEHOLD INCOME	$19,544
1979 MEDIAN HOUSEHOLD INCOME	$16,613
1980 FAMILIES BY 1979 INCOMES	282,747
$75,000+	2.15%
$50,000 TO $74,999	3.75%
$35,000 TO $49,999	10.03%
$25,000 TO $34,999	18.17%
$15,000 TO $24,999	27.27%
$ 7,500 TO $14,999	20.43%
UNDER $7,500	18.20%
1979 AVERAGE FAMILY INCOME	$22,626
1979 MEDIAN FAMILY INCOME	$19,460

ACCT #: 135009

06/26/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

TRADE AREA
JEFFERSON PARISH, LA

SITE: 302053
COORD:29:50.10 90:02.35

DESCRIPTION	TOTALS
1990 POPULATION BY SEX	1,100,650
MALE	48.33%
FEMALE	51.67%
1990 POPULATION BY AGE	1,100,650
UNDER 5 YEARS	8.01%
5 TO 9 YEARS	7.96%
10 TO 14 YEARS	7.20%
15 TO 19 YEARS	7.14%
20 TO 24 YEARS	8.54%
25 TO 29 YEARS	10.01%
30 TO 34 YEARS	9.56%
35 TO 44 YEARS	14.33%
45 TO 54 YEARS	9.26%
55 TO 59 YEARS	4.02%
60 TO 64 YEARS	3.97%
65 TO 74 YEARS	5.92%
75+ YEARS	4.08%
1990 MEDIAN AGE	30.96
1990 AVERAGE AGE	33.42
1990 FEMALE POPULATION BY AGE	568,681
UNDER 5 YEARS	7.64%
5 TO 9 YEARS	7.50%
10 TO 14 YEARS	6.92%
15 TO 19 YEARS	6.86%
20 TO 24 YEARS	8.47%
25 TO 29 YEARS	9.61%
30 TO 34 YEARS	9.04%
35 TO 44 YEARS	14.45%
45 TO 54 YEARS	9.44%
55 TO 59 YEARS	4.10%
60 TO 64 YEARS	4.17%
65 TO 74 YEARS	6.54%
75+ YEARS	5.25%
1990 FEMALE MEDIAN AGE	32.38
1990 FEMALE AVERAGE AGE	34.72

State of Louisiana Population Data

Page 1 through 7

Source: Equifax Marketing Decision Systems, Inc.—1991

ACCT #: 135009 06/25/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

ENTIRE STATE
LOUISIANA

SITE: 302052
COORD:00:00.00 000:00.00

DESCRIPTION	TOTALS
POPULATION	
1995 PROJECTION	4,264,760
1990 ESTIMATE	4,372,500
1980 CENSUS	4,205,900
1970 CENSUS	3,643,080
GROWTH 70-80	15.45%
HOUSEHOLDS	
1995 PROJECTION	1,550,400
1990 ESTIMATE	1,554,060
1980 CENSUS	1,411,790
1970 CENSUS	1,052,460
GROWTH 70-80	34.14%
POPULATION BY RACE & SPANISH ORIGIN	4,205,900
WHITE	69.24%
BLACK	29.44%
AMERICAN INDIAN	0.29%
ASIAN & PACIFIC ISLANDER	0.57%
OTHER RACES	0.47%
SPANISH ORIGIN - NEW CATEGORY	2.36%
OCCUPIED UNITS	1,411,790
OWNER OCCUPIED	65.53%
RENTER OCCUPIED	34.47%
1980 PERSONS PER HOUSEHOLD	2.91
YEAR ROUND UNITS AT ADDRESS	1,535,320
SINGLE UNITS	77.83%
2 TO 9 UNITS	9.67%
10+ UNITS	5.58%
MOBILE HOME OR TRAILER	6.91%
SINGLE/MULTIPLE UNIT RATIO	5.10
1990 ESTIMATED HOUSEHOLDS BY INCOME	1,554,060
$75,000 OR MORE	3.99%
$50,000 TO $74,999	8.20%
$35,000 TO $49,999	14.75%
$25,000 TO $34,999	15.65%
$15,000 TO $24,999	19.45%
$7,500 TO $14,999	17.78%
UNDER $7,500	20.18%
1990 ESTIMATED AVERAGE HH INCOME	$27,390
1990 ESTIMATED MEDIAN HH INCOME	$22,014
1990 ESTIMATED PER CAPITA INCOME	$9,815

ACCT #: 135009 06/25/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

ENTIRE STATE
LOUISIANA

SITE: 302052
COORD:00:00.00 000:00.00

DESCRIPTION	TOTALS
POPULATION BY SEX	4,205,900
MALE	48.50%
FEMALE	51.50%
POPULATION BY AGE	4,205,900
UNDER 5 YEARS	8.60%
5 TO 9 YEARS	8.23%
10 TO 14 YEARS	8.84%
15 TO 19 YEARS	10.13%
20 TO 24 YEARS	9.99%
25 TO 29 YEARS	8.77%
30 TO 34 YEARS	7.42%
35 TO 44 YEARS	10.70%
45 TO 54 YEARS	9.37%
55 TO 59 YEARS	4.50%
60 TO 64 YEARS	3.85%
65 TO 74 YEARS	6.06%
75+ YEARS	3.55%
MEDIAN AGE	27.50
AVERAGE AGE	31.87
FEMALE POPULATION BY AGE	2,166,010
UNDER 5 YEARS	8.21%
5 TO 9 YEARS	7.85%
10 TO 14 YEARS	8.44%
15 TO 19 YEARS	9.81%
20 TO 24 YEARS	9.72%
25 TO 29 YEARS	8.58%
30 TO 34 YEARS	7.31%
35 TO 44 YEARS	10.70%
45 TO 54 YEARS	9.53%
55 TO 59 YEARS	4.66%
60 TO 64 YEARS	4.05%
65 TO 74 YEARS	6.71%
75+ YEARS	4.44%
FEMALE MEDIAN AGE	26.44
FEMALE AVERAGE AGE	33.06
POPULATION BY HOUSEHOLD TYPE	4,205,900
FAMILY HOUSEHOLDS	88.28%
NON FAMILY HOUSEHOLDS	9.44%
GROUP QUARTERS	2.29%

ACCT #: 135009 06/25/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

ENTIRE STATE
LOUISIANA

SITE: 302052
COORD:00:00.00 000:00.00

DESCRIPTION	TOTALS
HISPANIC POPULATION BY RACE	99,134
WHITE	71.39%
BLACK	14.82%
AMERICAN INDIAN & ASIAN	1.93%
OTHER RACE	11.86%
HISPANIC POPULATION BY TYPE	4,205,900
NOT OF HISPANIC ORIGIN	97.64%
MEXICAN	0.68%
PUERTO RICAN	0.11%
CUBAN	0.19%
OTHER SPANISH	1.38%
MARITAL STATUS PERSONS 15+	3,126,610
SINGLE	26.53%
MARRIED	56.67%
SEPARATED	3.64%
WIDOWED	8.00%
DIVORCED	5.16%
MARITAL STATUS OF FEMALES 15+	1,635,170
SINGLE	23.17%
MARRIED	54.04%
SEPARATED	4.08%
WIDOWED	12.81%
DIVORCED	5.90%
PERSONS IN UNIT	1,411,790
1 PERSON UNITS	21.31%
2 PERSON UNITS	28.37%
3 PERSON UNITS	18.23%
4 PERSON UNITS	15.87%
5 PERSON UNITS	8.60%
6+ PERSON UNITS	7.63%
PERSONS IN RENTER UNITS	486,649
1 PERSON UNITS	32.01%
2 PERSON UNITS	26.56%
3 PERSON UNITS	16.60%
4 PERSON UNITS	11.68%
5 PERSON UNITS	6.34%
6+ PERSON UNITS	6.82%

ACCT #: 135009

06/25/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

ENTIRE STATE
LOUISIANA

SITE: 302052
COORD:00:00.00 000:00.00

DESCRIPTION	TOTALS
HOUSEHOLDS BY TYPE	1,411,790
SINGLE MALE	8.80%
SINGLE FEMALE	12.51%
MARRIED COUPLE	60.33%
OTHER FAMILY - MALE HEAD	2.78%
OTHER FAMILY - FEMALE HEAD	12.59%
NON FAMILY - MALE HEAD	1.89%
NON FAMILY - FEMALE HEAD	1.09%
HOUSEHOLDS WITH CHILDREN 0-18	642,401
MARRIED COUPLE FAMILY	76.56%
OTHER FAMILY - MALE HEAD	3.16%
OTHER FAMILY - FEMALE HEAD	19.62%
NON FAMILY	0.67%
1980 OWNER OCCUPIED PROPERTY VALUES	704,834
UNDER $25,000	25.24%
$25,000 TO $39,999	20.61%
$40,000 TO $49,999	13.66%
$50,000 TO $79,999	27.12%
$80,000 TO $99,999	6.57%
$100,000 TO $149,000	4.59%
$150,000 TO $199,999	1.23%
$200,000+	0.98%
1980 MEDIAN PROPERTY VALUE	$43,149
POPULATION BY URBAN VS RURAL	4,205,900
URBAN	68.65%
RURAL	31.35%
POPULATION ENROLLED IN SCHOOL	1,187,270
NURSERY SCHOOL	4.08%
KINDERGARTEN & ELEMENTARY (1-8)	56.11%
HIGH SCHOOL (9-12)	24.21%
COLLEGE	15.61%
POPULATION 25+ BY EDUCATION LEVEL	2,281,480
ELEMENTARY (0-8)	24.92%
SOME HIGH SCHOOL (9-11)	17.40%
HIGH SCHOOL GRADUATE (12)	30.94%
SOME COLLEGE (13-15)	12.83%
COLLEGE GRADUATE (16+)	13.90%

ACCT #: 135009 06/25/91

POP-FACTS: FULL DATA REPORT
(CENSUS ' 80, UPDATES & PROJECTIONS)
BY NATIONAL DECISION SYSTEMS 800-866-6510
PREPARED FOR
GOLF RESOURCE ASSOCIATES

ENTIRE STATE
LOUISIANA

SITE: 302052
COORD:00:00.00 000:00.00

DESCRIPTION	TOTALS
POPULATION 16+ BY OCCUPATION	1,639,390
EXECUTIVE AND MANAGERIAL	9.37%
PROFESSIONAL SPECIALTY	11.42%
TECHNICAL SUPPORT	3.02%
SALES	10.31%
ADMINISTRATIVE SUPPORT	15.89%
SERVICE: PRIVATE HOUSEHOLD	1.08%
SERVICE: PROTECTIVE	1.66%
SERVICE: OTHER	10.61%
FARMING FORESTRY & FISHING	2.42%
PRECISION PRODUCTION & CRAFT	15.75%
MACHINE OPERATOR	6.75%
TRANSPORTATION & MATERIAL MOVING	6.31%
LABORERS	5.40%
FEMALES 16+ WITH CHILDREN 0-18	602,938
WORKING WITH CHILD UNDER 6	21.23%
NOT WORKING WITH CHILD UNDER 6	27.04%
WORKING WITH CHILD 6-18 ONLY	28.73%
NOT WORKING WITH CHILD 6-18 ONLY	23.00%
HOUSEHOLDS BY NUMBER OF VEHICLES	1,411,790
NO VEHICLES	13.87%
1 VEHICLE	34.23%
2 VEHICLES	34.11%
3+ VEHICLES	17.79%
ESTIMATED TOTAL VEHICLES	2,250,080
POPULATION BY TRAVEL TIME TO WORK	1,600,200
UNDER 5 MINUTES	3.99%
5 TO 9 MINUTES	12.79%
10 TO 14 MINUTES	15.44%
15 TO 19 MINUTES	17.93%
20 TO 29 MINUTES	19.46%
30 TO 44 MINUTES	17.40%
45 TO 59 MINUTES	5.29%
60+ MINUTES	7.70%
AVERAGE TRAVEL TIME IN MINUTES	23.12
POPULATION BY TRANSPORTATION TO WORK	1,621,300
DRIVE ALONE	67.28%
CAR POOL	21.36%
PUBLIC TRANSPORTATION	4.26%
WALKED ONLY	3.96%
OTHER MEANS	1.89%
WORKED AT HOME	1.24%

ACCT #: 135009 06/25/91

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GOLF RESOURCE ASSOCIATES

ENTIRE STATE SITE: 302052
LOUISIANA COORD:00:00.00 000:00.00

DESCRIPTION	TOTALS
HOUSING UNITS BY YEAR BUILT	1,537,180
BUILT 1979 TO MARCH 1980	4.53%
BUILT 1975 TO 1978	11.79%
BUILT 1970 TO 1974	14.49%
BUILT 1960 TO 1969	21.98%
BUILT 1950 TO 1959	18.65%
BUILT 1940 TO 1949	12.67%
BUILT 1939 OR EARLIER	15.90%
1980 HOUSEHOLDS BY 1979 INCOMES	1,411,770
$75,000+	1.46%
$50,000 TO $74,999	2.69%
$35,000 TO $49,999	7.43%
$25,000 TO $34,999	14.67%
$15,000 TO $24,999	24.44%
$ 7,500 TO $14,999	22.41%
UNDER $7,500	26.92%
1979 AVERAGE HOUSEHOLD INCOME	$18,925
1979 MEDIAN HOUSEHOLD INCOME	$15,487
1980 FAMILIES BY 1979 INCOMES	1,074,480
$75,000+	1.92%
$50,000 TO $74,999	3.29%
$35,000 TO $49,999	9.04%
$25,000 TO $34,999	17.58%
$15,000 TO $24,999	27.14%
$ 7,500 TO $14,999	21.72%
UNDER $7,500	19.31%
1979 AVERAGE FAMILY INCOME	$21,667
1979 MEDIAN FAMILY INCOME	$18,112

ACCT #: 135009

06/25/91

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GOLF RESOURCE ASSOCIATES

ENTIRE STATE
LOUISIANA

SITE: 302052
COORD:00:00.00 000:00.00

DESCRIPTION	TOTALS
1990 POPULATION BY SEX	4,372,500
MALE	48.81%
FEMALE	51.19%
1990 POPULATION BY AGE	4,372,500
UNDER 5 YEARS	8.68%
5 TO 9 YEARS	8.55%
10 TO 14 YEARS	7.66%
15 TO 19 YEARS	7.62%
20 TO 24 YEARS	8.19%
25 TO 29 YEARS	8.83%
30 TO 34 YEARS	8.96%
35 TO 44 YEARS	14.22%
45 TO 54 YEARS	9.38%
55 TO 59 YEARS	3.79%
60 TO 64 YEARS	3.63%
65 TO 74 YEARS	6.24%
75+ YEARS	4.24%
1990 MEDIAN AGE	30.58
1990 AVERAGE AGE	33.05
1990 FEMALE POPULATION BY AGE	2,238,200
UNDER 5 YEARS	8.35%
5 TO 9 YEARS	8.16%
10 TO 14 YEARS	7.31%
15 TO 19 YEARS	7.26%
20 TO 24 YEARS	7.96%
25 TO 29 YEARS	8.68%
30 TO 34 YEARS	8.68%
35 TO 44 YEARS	14.18%
45 TO 54 YEARS	9.53%
55 TO 59 YEARS	3.91%
60 TO 64 YEARS	3.80%
65 TO 74 YEARS	6.83%
75+ YEARS	5.34%
1990 FEMALE MEDIAN AGE	31.77
1990 FEMALE AVERAGE AGE	34.28

[redacted] United States Population Data

Source: Equifax Marketing Decision Systems, Inc.—1991

ACCT #: 135009 09/11/90

POP-FACTS: FULL DATA REPORT
(CENSUS '80, UPDATES & PROJECTIONS)
BY EQUIFAX MARKETING DECISION SYSTEMS 800-877-5560
PREPARED FOR
GOLF RESOURCE ASSOCIATES

50 STATES AND DISTRICT OF COLUMBIA
ENTIRE USA

SITE: 282959
COORD: 00:00.00 000:00.00

DESCRIPTION	TOTALS
POPULATION	
1995 PROJECTION	261,130,000
1990 ESTIMATE	250,151,000
1980 CENSUS	226,546,000
1970 CENSUS	203,262,000
GROWTH 70-80	11.46%
HOUSEHOLDS	
1995 PROJECTION	100,445,000
1990 ESTIMATE	93,995,700
1980 CENSUS	80,389,700
1970 CENSUS	63,461,800
GROWTH 70-80	26.67%
POPULATION BY RACE & SPANISH ORIGIN	226,546,000
WHITE	83.15%
BLACK	11.70%
AMERICAN INDIAN	0.63%
ASIAN & PACIFIC ISLANDER	1.55%
OTHER RACES	2.98%
SPANISH ORIGIN - NEW CATEGORY	6.45%
OCCUPIED UNITS	80,389,700
OWNER OCCUPIED	64.43%
RENTER OCCUPIED	35.57%
1980 PERSONS PER HOUSEHOLD	2.75
YEAR ROUND UNITS AT ADDRESS	86,692,800
SINGLE UNITS	71.13%
2 TO 9 UNITS	13.81%
10+ UNITS	10.07%
MOBILE HOME OR TRAILER	4.99%
SINGLE/MULTIPLE UNIT RATIO	2.98
1990 ESTIMATED HOUSEHOLDS BY INCOME	93,995,700
$75,000 OR MORE	8.73%
$50,000 TO $74,999	14.91%
$35,000 TO $49,999	18.17%
$25,000 TO $34,999	15.52%
$15,000 TO $24,999	17.54%
$7,500 TO $14,999	14.10%
UNDER $7,500	11.04%
990 ESTIMATED AVERAGE HH INCOME	$36,474
990 ESTIMATED MEDIAN HH INCOME	$31,684
1990 ESTIMATED PER CAPITA INCOME	$13,802

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GOLF RESOURCE ASSOCIATES

50 STATES AND DISTRICT OF COLUMBIA SITE: 282959
ENTIRE USA COORD: 00:00.00 000:00.00

DESCRIPTION	TOTALS
POPULATION BY SEX	226,546,000
MALE	48.58%
FEMALE	51.42%
POPULATION BY AGE	226,546,000
UNDER 5 YEARS	7.22%
5 TO 9 YEARS	7.37%
10 TO 14 YEARS	8.05%
15 TO 19 YEARS	9.34%
20 TO 24 YEARS	9.41%
25 TO 29 YEARS	8.62%
30 TO 34 YEARS	7.75%
35 TO 44 YEARS	11.32%
45 TO 54 YEARS	10.06%
55 TO 59 YEARS	5.13%
60 TO 64 YEARS	4.45%
65 TO 74 YEARS	6.88%
75+ YEARS	4.40%
MEDIAN AGE	30.32
AVERAGE AGE	34.09
FEMALE POPULATION BY AGE	116,493,000
UNDER 5 YEARS	6.86%
5 TO 9 YEARS	7.01%
10 TO 14 YEARS	7.66%
15 TO 19 YEARS	8.94%
20 TO 24 YEARS	9.15%
25 TO 29 YEARS	8.43%
30 TO 34 YEARS	7.63%
35 TO 44 YEARS	11.22%
45 TO 54 YEARS	10.12%
55 TO 59 YEARS	5.27%
60 TO 64 YEARS	4.65%
65 TO 74 YEARS	7.57%
75+ YEARS	5.51%
FEMALE MEDIAN AGE	29.10
FEMALE AVERAGE AGE	35.37
POPULATION BY HOUSEHOLD TYPE	226,546,000
FAMILY HOUSEHOLDS	86.06%
NON FAMILY HOUSEHOLDS	11.40%
GROUP QUARTERS	2.54%

ACCT #: 135009 09/11/90

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PREPARED FOR
GOLF RESOURCE ASSOCIATES

50 STATES AND DISTRICT OF COLUMBIA
ENTIRE USA

SITE: 282959
COORD: 00:00.00 000:00.00

DESCRIPTION	TOTALS
HISPANIC POPULATION BY RACE	14,608,700
WHITE	55.55%
BLACK	2.68%
AMERICAN INDIAN & ASIAN	1.78%
OTHER RACE	39.99%
HISPANIC POPULATION BY TYPE	226,546,000
NOT OF HISPANIC ORIGIN	93.55%
MEXICAN	3.86%
PUERTO RICAN	0.89%
CUBAN	0.35%
OTHER SPANISH	1.35%
MARITAL STATUS PERSONS 15+	175,256,000
SINGLE	26.34%
MARRIED	57.30%
SEPARATED	2.33%
WIDOWED	7.69%
DIVORCED	6.34%
MARITAL STATUS OF FEMALES 15+	91,419,600
SINGLE	23.00%
MARRIED	54.77%
SEPARATED	2.65%
WIDOWED	12.38%
DIVORCED	7.19%
PERSONS IN UNIT	80,389,700
1 PERSON UNITS	22.70%
2 PERSON UNITS	31.32%
3 PERSON UNITS	17.38%
4 PERSON UNITS	15.39%
5 PERSON UNITS	7.61%
6+ PERSON UNITS	5.60%
PERSONS IN RENTER UNITS	28,595,100
1 PERSON UNITS	36.04%
2 PERSON UNITS	28.72%
3 PERSON UNITS	15.26%
4 PERSON UNITS	10.45%
5 PERSON UNITS	5.07%
6+ PERSON UNITS	4.46%

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GOLF RESOURCE ASSOCIATES

50 STATES AND DISTRICT OF COLUMBIA SITE: 282959
ENTIRE USA COORD: 00: 00. 00 000: 00. 00

DESCRIPTION	TOTALS
HOUSEHOLDS BY TYPE	80,389,700
SINGLE MALE	8.97%
SINGLE FEMALE	13.73%
MARRIED COUPLE	60.17%
OTHER FAMILY - MALE HEAD	2.61%
OTHER FAMILY - FEMALE HEAD	10.46%
NON FAMILY - MALE HEAD	2.46%
NON FAMILY - FEMALE HEAD	1.59%
HOUSEHOLDS WITH CHILDREN 0-18	32,199,600
MARRIED COUPLE FAMILY	78.60%
OTHER FAMILY - MALE HEAD	3.08%
OTHER FAMILY - FEMALE HEAD	17.54%
NON FAMILY	0.78%
1980 OWNER OCCUPIED PROPERTY VALUES	39,470,700
UNDER $25,000	18.42%
$25,000 TO $39,999	21.18%
$40,000 TO $49,999	14.30%
$50,000 TO $79,999	28.67%
$80,000 TO $99,999	7.77%
$100,000 TO $149,000	6.42%
$150,000 TO $199,999	1.81%
$200,000+	1.43%
1980 MEDIAN PROPERTY VALUE	$49,687
POPULATION BY URBAN VS RURAL	226,546,000
URBAN	73.74%
RURAL	26.26%
POPULATION ENROLLED IN SCHOOL	62,054,300
NURSERY SCHOOL	3.92%
KINDERGARTEN & ELEMENTARY (1-8)	51.54%
HIGH SCHOOL (9-12)	24.59%
COLLEGE	19.95%
POPULATION 25+ BY EDUCATION LEVEL	132,836,000
ELEMENTARY (0-8)	18.26%
SOME HIGH SCHOOL (9-11)	15.27%
HIGH SCHOOL GRADUATE (12)	34.59%
SOME COLLEGE (13-15)	15.65%
COLLEGE GRADUATE (16+)	16.23%

ACCT #: 135009 09/11/90

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GOLF RESOURCE ASSOCIATES

50 STATES AND DISTRICT OF COLUMBIA SITE: 262959
ENTIRE USA COORD: 00:00.00 000:00.00

DESCRIPTION	TOTALS
POPULATION 16+ BY OCCUPATION	97,639,400
EXECUTIVE AND MANAGERIAL	10.38%
PROFESSIONAL SPECIALTY	12.31%
TECHNICAL SUPPORT	3.05%
SALES	10.00%
ADMINISTRATIVE SUPPORT	17.26%
SERVICE: PRIVATE HOUSEHOLD	0.60%
SERVICE: PROTECTIVE	1.51%
SERVICE: OTHER	10.82%
FARMING FORESTRY & FISHING	2.88%
PRECISION PRODUCTION & CRAFT	12.90%
MACHINE OPERATOR	9.30%
TRANSPORTATION & MATERIAL MOVING	4.50%
LABORERS	4.49%
FEMALES 16+ WITH CHILDREN 0-18	30,635,000
WORKING WITH CHILD UNDER 6	20.31%
NOT WORKING WITH CHILD UNDER 6	24.15%
WORKING WITH CHILD 6-18 ONLY	35.01%
NOT WORKING WITH CHILD 6-18 ONLY	20.53%
HOUSEHOLDS BY NUMBER OF VEHICLES	80,389,700
NO VEHICLES	12.92%
1 VEHICLE	35.53%
2 VEHICLES	34.02%
3+ VEHICLES	17.52%
ESTIMATED TOTAL VEHICLES	128,339,000
POPULATION BY TRAVEL TIME TO WORK	94,487,100
UNDER 5 MINUTES	4.07%
5 TO 9 MINUTES	13.78%
10 TO 14 MINUTES	16.64%
15 TO 19 MINUTES	17.07%
20 TO 29 MINUTES	19.95%
30 TO 44 MINUTES	16.93%
45 TO 59 MINUTES	5.56%
60+ MINUTES	6.00%
AVERAGE TRAVEL TIME IN MINUTES	21.70
POPULATION BY TRANSPORTATION TO WORK	96,617,300
DRIVE ALONE	64.37%
CAR POOL	19.73%
PUBLIC TRANSPORTATION	6.39%
WALKED ONLY	5.60%
OTHER MEANS	1.65%
WORKED AT HOME	2.26%

ACCT #: 135009

09/11/90

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PREPARED FOR
GOLF RESOURCE ASSOCIATES

50 STATES AND DISTRICT OF COLUMBIA
ENTIRE USA

SITE: 282959
COORD: 00:00.00 000:00.00

DESCRIPTION	TOTALS
HOUSING UNITS BY YEAR BUILT	86,758,700
BUILT 1979 TO MARCH 1980	3.49%
BUILT 1975 TO 1978	9.64%
BUILT 1970 TO 1974	13.08%
BUILT 1960 TO 1969	19.69%
BUILT 1950 TO 1959	17.14%
BUILT 1940 TO 1949	11.11%
BUILT 1939 OR EARLIER	25.84%
1980 HOUSEHOLDS BY 1979 INCOMES	80,387,100
$75,000+	1.39%
$50,000 TO $74,999	3.20%
$35,000 TO $49,999	8.65%
$25,000 TO $34,999	15.74%
$15,000 TO $24,999	26.58%
$ 7,500 TO $14,999	23.20%
UNDER $7,500	21.24%
1979 AVERAGE HOUSEHOLD INCOME	$20,307
1979 MEDIAN HOUSEHOLD INCOME	$17,270
1980 FAMILIES BY 1979 INCOMES	59,190,200
$75,000+	1.74%
$50,000 TO $74,999	3.94%
$35,000 TO $49,999	10.70%
$25,000 TO $34,999	19.08%
$15,000 TO $24,999	29.42%
$ 7,500 TO $14,999	21.57%
UNDER $7,500	13.55%
1979 AVERAGE FAMILY INCOME	$23,144
1979 MEDIAN FAMILY INCOME	$20,072

ACCT #: 135009

09/11/90

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GOLF RESOURCE ASSOCIATES

50 STATES AND DISTRICT OF COLUMBIA
ENTIRE USA

SITE: 282959
COORD: 00:00.00 000:00.00

DESCRIPTION	TOTALS
1990 POPULATION BY SEX	250,151,000
MALE	48.73%
FEMALE	51.27%
1990 POPULATION BY AGE	250,151,000
UNDER 5 YEARS	7.36%
5 TO 9 YEARS	7.35%
10 TO 14 YEARS	6.91%
15 TO 19 YEARS	6.83%
20 TO 24 YEARS	7.51%
25 TO 29 YEARS	8.55%
30 TO 34 YEARS	8.94%
35 TO 44 YEARS	15.14%
45 TO 54 YEARS	10.20%
55 TO 59 YEARS	4.25%
60 TO 64 YEARS	4.30%
65 TO 74 YEARS	7.36%
75+ YEARS	5.28%
1990 MEDIAN AGE	33.65
1990 AVERAGE AGE	35.57
1990 FEMALE POPULATION BY AGE	128,242,000
UNDER 5 YEARS	7.01%
5 TO 9 YEARS	7.00%
10 TO 14 YEARS	6.58%
15 TO 19 YEARS	6.51%
20 TO 24 YEARS	7.34%
25 TO 29 YEARS	8.33%
30 TO 34 YEARS	8.70%
35 TO 44 YEARS	14.92%
45 TO 54 YEARS	10.21%
55 TO 59 YEARS	4.34%
60 TO 64 YEARS	4.46%
65 TO 74 YEARS	7.97%
75+ YEARS	6.64%
1990 FEMALE MEDIAN AGE	34.89
1990 FEMALE AVERAGE AGE	36.88

APPENDIX B

ROBERT CHARLES LESSOR
MARKET ANALYSIS AND DEVELOPMENT STRATEGY AND UPDATE FOR 367 ACRES ADJACENT TO NEW PUBLIC GOLF COURSE; METAIRIE, LOUISIANA

ROBERT CHARLES LESSER & CO.
REAL ESTATE ADVISORS

DATE: October 17, 1994 02-4680.03

TO: MR. THOMAS CARRERE

FROM: ROBERT CHARLES LESSER & CO.

SUBJECT: Market Analysis Update Analyzing the Need for 367 Acres to be Developed Adjacent to a Proposed Public Golf Course; Metaire, Louisiana

Pursuant to our proposal-agreement dated September 2, 1994, we are pleased to present this memorandum summarizing our findings, conclusions, and recommendations relative to the above subject. This memorandum represents an update of our previous study, completed in December of 1992 (02-4680.00).

SUBJECT PROPERTY

- The subject property, known as Estelle Plantation, is located on Lafitte Larose Highway, a north-south four lane artery that extends from Barataria Boulevard and bisects the property. The site is within Jefferson Parish on the West Bank of the Mississippi River.

- Land uses surrounding the subject property have not changed much in the past two years since our original study of the market:

    - To the north and west of the subject site are concentrations of low to lower middle income housing. These homes are mainly single story brick ranches in the $50,000 to $75,000 price range. According to the University of New Orleans, the average

home price in the Estelle area has ranged from $58,842 to $70,151 since 1987. This suggests a lack of middle to upper end housing in the area[1], which is critical to the area's long-term economic viability.

- Two older, fully developed communities, Stonebridge (which includes a golf course) and Plantation Estates provide executive housing in the area, with home prices generally ranging from $150,000 to $400,000. Barkley Estates, located on Lapalco Boulevard, is a newer upper-end community that recently began selling lots in the $35,000 to $55,000 range (sales started in January 1994).

- The Belle Promenade Mall, a regional shopping center located to the north of the property at the intersection of Lapalco and Manhattan Boulevards, is the location of the nearest retail and commercial concentration. These retail and commercial services will serve the future residents of the Estelle Plantation.

- Land due south and east of Estelle Plantation is currently undeveloped. Some of the parcels are privately owned with the remainder owned by the National Wildlife and Forest Reserve.

- The proposed golf course will be a municipal course, developed on approximately 175 acres donated to the Parish. Historically, both public and private golf courses have the ability, if well designed and maintained, to increase the value of surrounding residential land. This is due to the limited supply of amenity-oriented housing in the New Orleans area, and the strong interest among consumers in such housing. Examples of this include Stonebridge and Beau Chene, which are largely built-out.

[1] It should be noted that Barkley Estates is included in the Estelle survey area, but none of its sales occurred in the survey time frame. With these figures added, the average home price and price per square foot range is actually higher. The apparent success of Barkley Estates demonstrates that executive and middle management housing in the area is a viable option for the Estelle Plantation.

ECONOMIC OVERVIEW

- Local and regional economic expectations provide the relative context for future housing needs in the market area, as summarized below.

- While much of the nation has recovered from the 1991 economic recession, the recovery has occurred slowly in the New Orleans Metropolitan Statistical Area (MSA)[2]. Jefferson Parish and the West Bank Competitive Market Area (CMA)[3] are experiencing a stronger recovery compared to other parts of the MSA in terms of population and employment growth.

- Expectations are that the lack of land for new housing in parishes that received stronger growth in the last growth cycle (Orleans and St. Tammany) will contribute to the need for new housing and employment venues in the West Bank area during the current growth cycle.

- The West Bank CMA currently attracts nearly 44% of all population growth in the New Orleans MSA. This trend is expected to continue until 1999.

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[2] The New Orleans MSA includes Orleans, Jefferson, St. Tammany, St. Charles, St. Bernard, and St. John the Baptist Parishes. Estelle Plantation is located in Jefferson Parish.

[3] The West Bank CMA for population purposes is defined as: Jefferson Parish south of the Mississippi River, north of Louisiana Highway 301, and east of the Bayou Signette and Dugues Canals.

Population and employment growth trends are projected to be stronger in the 1994 to 1999 period than they were in the 1990 to 1994 period. This is especially true for employment growth in Jefferson Parish.

	EST. 1994	PROJ. 1999	--Ann. Number Change-- 1980-90	1990-94	1994-99	--Comp. Ann. Growth-- 1980-90	1990-94	1994-99
NEW ORLEANS MSA								
Non-Farm Employment	696,870	747,890	427	4,950	10,204	0.1%	0.7%	1.4%
Population	1,312,652	1,343,454	(1,866)	6,846	6,160	-0.1%	0.5%	0.5%
Households	482,400	498,032	1,679	3,144	3,126	0.4%	0.7%	0.6%
Household size	2.71	2.64						
JEFFERSON PARISH								
Non-Farm Employment	236,760	271,680	4,478	2,793	6,984	2.2%	1.2%	2.7%
Population	463,398	480,125	(629)	3,773	3,345	-0.1%	0.8%	0.7%
Households	173,521	182,101	1,071	1,781	1,716	0.7%	1.0%	1.0%
Household size	2.63	2.57						
WEST BANK CMA								
Population	178,631	192,145	833	3,001	2,703	0.5%	1.7%	1.4%
Households	61,094	66,282	580	1,098	1,038	1.1%	1.8%	1.6%
Household size	2.70	2.58						

- Employment growth trends indicate that in terms of job growth, New Orleans has shifted from a trade to a services oriented economy over the past decade. Many of the area's service businesses are tourist and visitor-oriented. These include the hospitality and retail trade sectors.

- Conventions, Mardi Gras and other amusements, including the newest industry in New Orleans -- gaming -- are also visitor oriented. In New Orleans alone, it is expected that 450,000 square feet of gaming area in ten facilities will be open by 1995. These figures do not include Riverboats or facilities on the Gulf Coast.

- The new gaming venues are expected to generate a substantial number of new jobs, and create a need for new housing potentially above what had been previously forecasted by regional planning agencies.

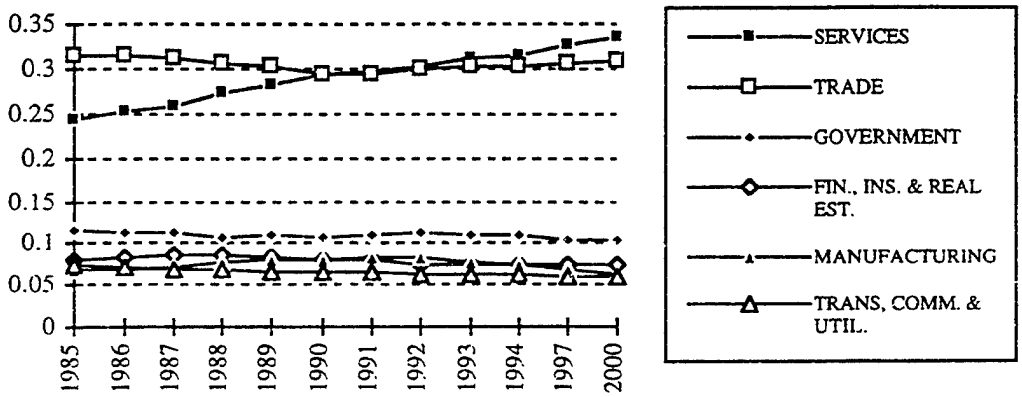
- The oil industry has historically been an important part of the New Orleans economy. Its decline has been associated with New Orleans' overall economic prospects. Oversupply has continued to depress oil prices worldwide. A 1992 environmental law places a $150 million bonding liability on offshore wells by 1996. Very few private firms say they can meet this requirement. Therefore many wells may be closed (should this have the effect of constricting supply and raising oil prices, the industry may be helped, though there will still be fewer oil-related jobs).

- Employment trends for the New Orleans MSA are reflected in the employment patterns of Jefferson Parish. However, oil is not as important to Jefferson Parish as in other areas of the MSA. The services sector accounts for one out of every three jobs in Jefferson. According to the Federal Reserve Bank of Atlanta, New Orleans has more health, education, and legal services as a percentage of employment than other states in the Southeast. Retail trade is the second most important sector in the Parish.

- It is possible that port facilities may eventually move to expand out of Orleans Parish due to its relatively antiquated facilities to areas with less expensive land which can accommodate ships as well as barges. Jefferson Parish is a likely candidate for such a relocation, which would create additional demand for housing in the Parish.

- The following table illustrates how Jefferson Parish has evolved in terms of non-farm employment distributions.

The Service Sector has Clearly Replaced Trade as the Dominant Industrial Sector, While Other Sectors Remain Unchanged or in Decline



Source: National Planning Association

- It is important to note that export industries such as finance, insurance, and real estate are under-represented in the New Orleans MSA, as compared to their percentage of employment in other metro areas.

- Service sector and retail trade jobs are typically lower wage than other sectors, such as finance, insurance, and real estate. This indicates that as new jobs arise in these sectors, a greater demand for housing will be for more moderately priced product, predominately under $200,000.

- In 1994, new single family residential units authorized by building permit are expected to reach their highest levels since the mid 1980's. Single family permits have yet to approach the peak of that time period, but overall trends indicate that the single family market is improving greatly compared to the late 1980's and early 1990's. Multifamily permits indicate that the multifamily sector has not yet recovered.

Single-Family Units Authorized By Building Permit Have Steadily Risen Since 1990

	1980	1983	1986	1990	1991	1992	1993	1994
New Orleans MSA								
SFD	4,319	6,853	3,257	1,979	2,340	3,031	3,373	3,854
MF	3,604	6,452	603	303	140	261	260	372
Total	7,923	13,305	3,860	2,282	2,480	3,292	3,633	4,226
Jefferson Parish								
SFD	1,659	2,586	1,171	517	646	726	714	914
MF	1,469	3,181	126	188	2	150	160	82
Total	3,128	5,767	1,297	705	648	876	874	996
Jefferson as a % of MSA								
SFD	38.4%	37.7%	36.0%	26.1%	27.6%	24.0%	21.2%	23.7%
MF	40.8%	49.3%	20.9%	62.0%	1.4%	57.5%	61.5%	22.0%
Total	39.5%	43.3%	33.6%	30.9%	26.1%	26.6%	24.1%	23.6%

- Population and income measures indicate that homeowners in the New Orleans MSA, Jefferson Parish, and the West Bank CMA are becoming both wealthier and older. In New Orleans and the West Bank, the percentage of households earning more than $35,000 was 34% in 1994. Forecasts predict that by 1999 50% of these households will earn at least this much.

- In absolute numbers, the 35 to 44 age range has become the largest in New Orleans, Jefferson Parish, and the West Bank CMA, replacing the 25 to 34 age range. Currently, 35 to 44 year olds comprise 24% of New Orleans population, declining to 23% in 1999. In West Bank, the percentage is expected to rise from 26% in 1994 to 27% in 1999.

    - The propensity to purchase upgrade and move-up housing is high among the age ranges of 25 to 34 and 35-44, especially among married couples with children. National trends, wherein married couples with children comprise 60% of all move-up buyers and 54% of all new home buyers, are reflected in the market profiles of New Orleans home buyers. Based on the statistics

presented in the preceding paragraph, we conclude that Estelle Plantation should market neighborhoods to these demographic segments.

- As shown in the following table, New Orleans Metro home prices have risen 12.9% in the last six years. Over the same period, Jefferson Parish home prices have appreciated almost twice as much. Most of its upper end housing is located in Old Metaire.

Jefferson Parish Home Prices Have Appreciated Almost Twice as Much as the New Orleans Metro Area Overall

PARISH	1987 AVERAGE HOME PRICE	1990 AVERAGE HOME PRICE	1991 AVERAGE HOME PRICE	1992 AVERAGE HOME PRICE	1993 AVERAGE HOME PRICE	1993-87 PERCENT CHANGE
ORLEANS	$83,738	$94,514	$90,643	$99,252	$104,085	24.3%
JEFFERSON	$82,152	$85,397	$88,039	$94,374	$100,791	22.7%
ST. BERNARD	$64,147	$62,398	$63,397	$66,847	$66,526	3.7%
ST. CHARLES	$95,566	$130,076	$115,775	$99,200	$108,535	13.6%
ST. JOHN	$64,724	$65,359	$65,359	$69,742	$68,835	6.4%
ST. TAMMANY	$85,480	$84,537	$84,969	$107,746	$115,148	34.7%
METRO AREA	**$89,525**	**$87,720**	**$87,129**	**$94,879**	**$101,073**	**12.9%**

COMPETITIVE MARKET

- The Competitive Maket Area (CMA) is the geographic area within which residential projects and commrcial developments will compete for available consumer demand on a more or less equal basis. The CMA encompasses all of Jefferson Parish south of the Mississippi River, north of Louisiana Highyay 301, and east of the Bayou Signette and Dugues Canals.

- The metro New Orleans residential real estate market has recovered from the 1991 recession. According to the University of New Orleans Real Estate Market Data Center, a record $871 million was spent on new and resale homes in 1993. Over 9,100 homes were sold in 1993, the greatest number in the past decade.

- According to Dr. Wade Ragas at the University of New Orleans, continued low interest rates, the lowest in 30 years, fueled the housing recovery. A renewed confidence of the home buying public was also beneficial. In addition, he states that as of mid-year 1994 there was less than one year's supply of new housing currently on the market.

    - Home prices in the metro area have been expected to rise as supply becomes more constricted. Due to a lack of land in New Orleans, especially large tracts, a building surge is not expected in response to the improved supply/demand conditions. These very favorable conditions for new development may create an opportunity for the subject site to capture more than its fair share in residential sales, over the long-term.

- Eight projects within the New Orleans MSA which are judged to be competitive to the subject property were surveyed. Among the projects surveyed were competitive planned unit developments with golf courses and selected single-family subdivisions located in Jefferson Parish. Surveys indicate that the more successful large scale projects are moderately priced or have moderately priced product offered along with more expensive housing.

    - Greenleaves and the Ormond Country Club are successful golf oriented projects located on the north and west side, respectively, of Lake Pontchartrain. These developments have historically sold ten and eight homes per month, respectively. Both of these projects offer distinct neighborhoods and were developed in phases. More expensive housing was offered once the projects had established themselves relative to the market.

- The two most expensive new home communities in New Orleans, English Turn and Eastover, have experienced somewhat slower sales than the more moderately priced communities, with an annual absorption of 52 and 36 homes, respectively. These two golf-oriented communities do not offer any moderately priced housing, aside from cluster homes, along with executive housing.

- New home prices in the competitive market range from $50,000 (a 900 square foot condominium) to over $2,000,000 for a 15,000 square foot mansion.

- Lot prices in the competitive market range from $20,000 on a 7,700 square foot lot to $275,000 for a 168,692 square foot parcel .

- While many existing homes in the area are priced much lower, prices for the majority of homes in surveyed active new developments are between $150,000 and $300,000. Average lot price is between $35,000 and $65,000 and sizes for the majority of lots sold is between one-third to one-half of an acre.

- Lot to home ratios for the most successful projects average between 18% to 25%. English Turn and Eastover have higher lot to home ratios, but are priced at the very high-end of the market.

- Buyers in most new communities surveyed are largely between the ages of 30 to 45. Many of these buyers are families with young children. Some empty nesters are drawn to golf course communities because of the prestige associated with such developments, and the fact that their evolving lifestyle allows them more time for recreational pursuits like golf.

- According to sales agents interviewed, buyers are motivated to purchase by a "good value", especially in perceived secure areas outside of the city, as expressed in terms of lot size, home size, and quality for the price.

- The most successful projects in our survey will be sold out of developer offered lots and homes within one to two years. Indicating a need for new development at the subject property, Barkley Estates, a new home community which is selling well, does not have a golf course, thereby giving the subject site a competitive advantage once its course is in place.

- As available lots sell-out in the historically more popular areas of St. Tammany and the East Bank, demand should increase for housing on the West Bank. Because of the lack of land in St. Tammany and the East Bank areas, other new recreational communities which might begin sales in the next five to ten years would be located approximately an hour drive away from Downtown New Orleans. Commutes from Estelle Plantation are considerably shorter, thereby giving the subject property an advantage.

DEMAND ANALYSIS

- A statistical demand analysis was conducted to evaluate the potential depth of the market and need for lots to be developed for single-family detached homes at the subject site. This analysis is a critical component of determining the need for new housing at Estelle Plantation.

- Lot and home prices analyzed were determined by demographic conditions within the CMA and historical trends in for-sale housing. The mix of lot prices investigated range from $25,000 to a maximum of $78,000. Home prices, calculated on the basis of a lot to home ratio in the 18% to 24% range, are $140,000 to $310,000. The statistical analysis is consistent with historical market performance of competitive properties and future growth forecasts and trends for the MSA and the CMA.

- The need for new single-family homes will be generated from three primary sources:

    1) New households - households migrating to the New Orleans MSA or new household formations due to the aging of the population and lifestyle considerations;

    2) Owner preference - households within the MSA who presently own their own home but need to buy a new residence due to their family growing with the addition of children or other lifestyle changes (i.e., upgrade, move-up, move-over or move-down buyers);

    3) Renter upgrading - households within the MSA presently renting who wish to pursue the "American Dream" of home ownership.

- Factors creating need within the market include expanding families, in-migration, income distributions, home ownership propensity and turnover (i.e., propensity to move in a given year).

- To estimate each income group's propensity to purchase a new home as opposed to a resale home or other product type, an "active market factor" was applied to the qualified groups of potential buyers. This factor, applied to income and home owner qualified households, is based on an analysis of product availability by price range and the percentage of new versus resale home sales by price range in the MSA.

- Total annual new housing need derived from the West Bank CMA within the indicated price ranges is anticipated to be 350 units annually over the next five years. Forty-seven percent of the CMA's total need, or 164 each year, will be derived from new households moving into the West Bank CMA and needing housing in the $140,000 to $310,000 price range. Existing households "moving up" will account for another 44%, or 154 households annually. Renter households purchasing their first home will account for about 9% or 31 homes each year.

- Based on an assessment of the market and competitive alternatives, the subject site may be capable of capturing as much as of 20% of the West Bank CMA's need for new housing (for lots priced from $25,000 to $75,000). This capture rate equates to a potential for 76 sales per year, assuming that the property is developed in four separate neighborhoods selling simultaneously (see Exhibit 12).

- This analysis is an estimate of demand of potential by price range. Actual absorption will be affected by such factors as overall economic conditions, the resale market, home mortgage interest rates, existing inventory and competitiveness in the CMA at the time sales activity is engaged, the golf course amenity, and the effectiveness of the marketing strategy employed.

Lot Price:	$25,000 $32,000	$32,000 $40,000	$44,000 $53,000	$55,000 $68,000	$68,000 $78,000	
Lot to home ratio:	18% 20%	20% 20%	22% 22%	23% 25%	25% 25%	
Home Price:	$140,000	$160,000	$200,000	$240,000	$270,000	
i = 9.0%	$160,000	$200,000	$240,000	$270,000	$310,000	
Income: /1	$40,000	$50,000	$62,500	$75,000	$85,000	
SOURCES OF DEMAND	$49,999	$62,499	$74,999	$85,000	$95,000	Total
New Household Growth, 1994-1999						
Total Annual New Households,						
West Bank CMA. 1994 /2	1,038	1,038	1,038	1,038	1,038	
x Income Qualified /3	33%	25%	15%	8%	5%	
= Income Qualified	343	260	156	83	52	
x Owner Propensity /3	82%	90%	93%	95%	98%	
= Qualified New Households	281	234	145	79	51	
x Active Market Factor /4	20%	21%	21%	22%	22%	
Subtotal, from New Household Growth	56	49	30	17	11	164
Existing Owner Household Annual Turnover						
Total Owner Households,						
West Bank CMA, 1994 /2	49,712	49,712	49,712	49,712	49,712	
x Income Qualified /3	33%	25%	15%	8%	5%	
= Income Qualified	16,405	12,428	7,457	3,977	2,486	
x Annual Turnover Rate /3	6%	6%	6%	6%	7%	
= Qualified Owners in Turnover	984	746	447	239	174	
x Active Market Factor /4	6%	6%	6%	6%	7%	
Subtotal, from Owner Turnover	56	45	27	15	11	154
Existing Renter Household Annual Turnover						
Total Renter Households,						
West Bank CMA, 1994 /2	16,571	16,571	16,571	16,571	16,571	
x Income Qualified /3	5.9%	2.5%	1.1%	0.4%	0.1%	
= Income Qualified	984	414	174	66	17	
x Annual Turnover Rate /3	35%	35%	35%	35%	35%	
= Qualified Renters in Turnover	345	145	61	23	6	
x Active Market Factor /4	5%	6%	6%	6%	6%	
Subtotal, from Renter Turnover	17	9	4	1	0	31
TOTAL ESTIMATED ANNUAL POTENTIAL DEMAND:	130 *37.0%*	102 *29.3%*	61 *17.4%*	34 *9.7%*	23 *6.6%*	350 *100.0%*
ESTELLE PLANTATION CAPTURE: 5/	25% 32 2.7	23% 24 2.0	23% 14 1.2	16% 5 0.5	4% 1 0.1	22% 76 6.4

NOTES:
1/ Affordability based on 9.0% interest rate, varying down payments increasing by income, and 30 year term.
2/ West Bank CMA demographics.
3/ US Census, and Urban Decision Systems demographic analysis, assuming current demographics for the CMA.
4/ RCLCo. estimate from alternatives in the market, market segmentation, and market activity.
5/ Capture for Subject Property assumes broad price range and product inventory, as well as competitive alternatives by price range.

SOURCE: Robert Charles Lesser & Co.

CONCLUSIONS AND RECOMMENDATIONS

- The outlook for residential construction activity remains bright for the near future, if:

  (1) Mortgage rates remain favorable;

  (2) Inventory levels continue to be depleted;

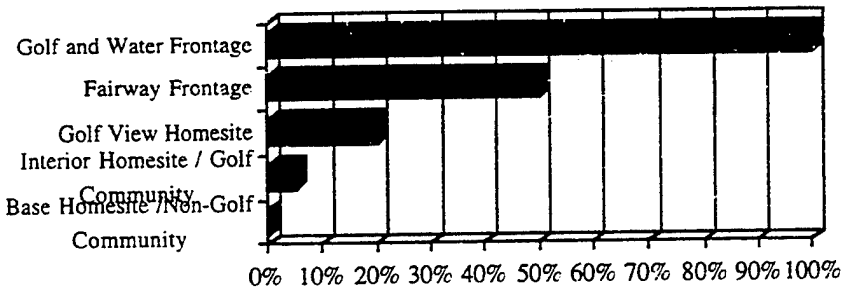
  (3) Job growth equals the expectations; and

  (4) Consumer confidence remains high.

- Based on our understanding of the West Bank CMA, the findings of our survey of actively selling residential properties and the analysis of demographic and socioeconomic trends, we continue to believe that the site can support a lot sales program with lots available in the $25,000 to $75,000 range.

- Housing consumers are attracted by the golf course orientation due to the aesthetically pleasing views the golf course provides for many of the homes. In addition, it is anticipated that about 30% of the home buyers will actually be golfers themselves, based on the experience of other golf-oriented communities.

Fairway Frontage Lots Can Realize Premiums of 50% or More Above Base Prices



Percent Premium Above Base Price

Source: Urban Land Institute

- The anticipated strong demand for amenity-oriented housing and historically limited supply suggests that many of the Estelle Plantation lots will be higher priced than they would have been without the golf course. Though the golf-front lots will enjoy the most significant impact, generally all lots within a golf-oriented community enjoy some degree of premium and are positively affected relative to dollar value.

- Our experience with developments nationally demonstrates that golf course communities often attract middle to upper class buyers. As the income profile of a community's residents rises, newer and higher quality retail may follow due to consumer demand. This suggests that the subject property could also have a positive influence on surrounding retail development in the community.

- Higher premiums are achieved for lots and houses in a golf course community versus comparable lots in a non-golf community. A private golf course commands higher lot premiums than lots fronting a municipal course; however, lots oriented to the planned golf course are expected to command significant premiums.

- Based on demographic and socio-economic demand factors, and due to the higher sales rates of golf-oriented communities with "moderately priced" housing, a similar pricing

is recommended for the subject property. The community should be developed with four price and product segment neighborhoods. The following table provides a recommended product program for Estelle Plantation:

Product Types:	Approx. Lot Sizes:	Lot Prices:	Home Prices:	Annual Absorption:
Upgrade Production	9,500-10,890	$25,000 - $29,000	$140,000 - $160,000	32
Move-up Semi-Custon	12,000-13,500	$33,350 - $37,950	$160,000 - $200,000	24
Exec. Custom Home	14,000-16,000	$47,250 - $54,000	$200,000 - $240,000	14
Luxury Custom Home	19,000-21,000	$66,000 - $75,000	$240,000 - $270,000	6
			Total:	76

SOURCE: Robert Charles Lesser & Co.

- The Upgrade Production and Move-up Semi-Custom segments could be sold to one or more merchant builders. The Executive and Luxury Custom Home segments should feature a lot sales program oriented to selected custom home builders (see Exhibit 11).

- Product phasing is designed to achieve high sales absorption and an optimum build-out period. The phasing analysis is based on allocated acreage to a product line and that product's estimated absorption. Infrastructure such as roads and other open space (excluding the golf course) are estimated to occupy 30% of Estelle Plantation's 367 acres, so densities are shown as "net" rather than "gross". It is recommended that the following product phasing be applied to the subject property.

	Product	Ann. Acres Absorp.	Total Acres Alloc.	% Acres Alloc.	Years=====> 1-11	12	13
1	Upgrade Production	10.7	117.1	32%	10.7	0.0	0.0
2	Move-up Semi-Cust.	10.0	111.2	30%	10.0	1.2	0.0
3	Exec. Custom Home	7.0	78.5	21%	7.0	1.5	0.0
4	Lux. Custom Home	5.3	60.2	16%	5.3	1.5	0.0
	Total	33.0	367.0	100%	33.0	4.3	0.0

SOURCE: Robert Charles Lesser & Co.

- It is important to note that this phasing analysis assumes four separate neighborhoods, as described above, selling homes and lots simultaneously. Furthermore, it assumes that the land plan results in lots that fit the lot orientations provided above, i.e., that the proportion of golf view, fairway frontage, etc. lots can be achieved by the site plan. To the degree that the final site plan deviates from the plan described above, the annual acreage absorptions shown may not be achieved.

- The highest allocation of acreage is given to the Upgrade Production and Move-up Semi-Custom product segments. Estelle Plantation is well suited to attract buyers in each segment, with the majority of buyers attracted to the product priced under $200,000.

- We appreciate the opportunity to assist you with your project. This assignment was conducted by Gregg T. Logan, Senior Vice President and Neel Stacy, Associate.

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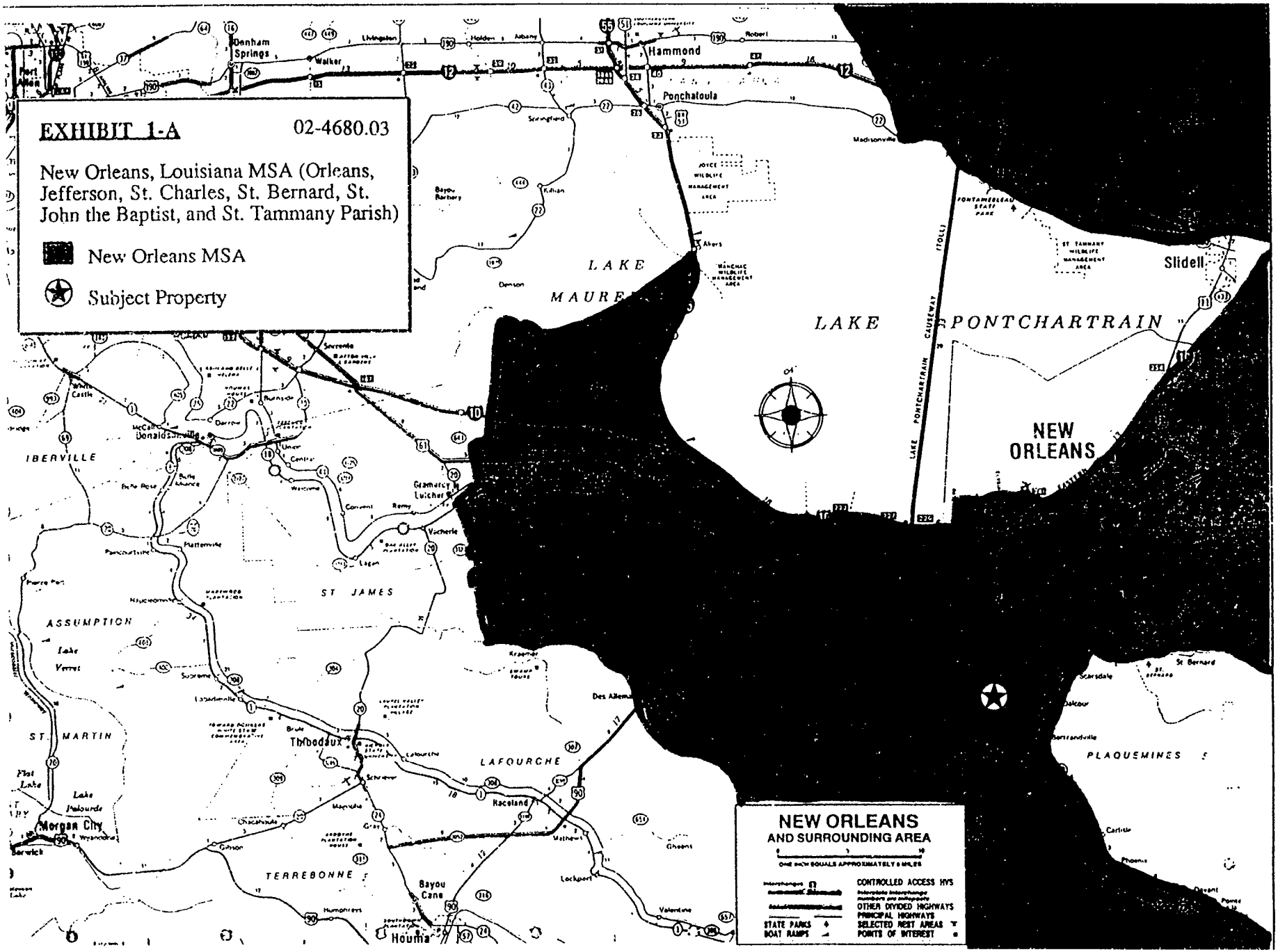


EXHIBIT 1-A
02-4680.03
New Orleans, Louisiana MSA (Orleans, Jefferson, St. Charles, St. Bernard, St. John the Baptist, and St. Tammany Parish)
New Orleans MSA
Subject Property
Denham Springs
Walker
Hammond
Ponchatoula
Slidell
LAKE MAUREPAS
LAKE PONTCHARTRAIN
LAKE PONTCHARTRAIN CAUSEWAY (TOLL)
NEW ORLEANS
IBERVILLE
ST JAMES
ASSUMPTION
ST MARTIN
LAFOURCHE
TERREBONNE
PLAQUEMINES
Thibodaux
Raceland
Morgan City
Houma
Bayou Cane
NEW ORLEANS
AND SURROUNDING AREA
ONE INCH EQUALS APPROXIMATELY 6 MILES
CONTROLLED ACCESS HYS
OTHER DIVIDED HIGHWAYS
PRINCIPAL HIGHWAYS
STATE PARKS
BOAT RAMPS
SELECTED REST AREAS
POINTS OF INTEREST

EXHIBIT 1-B 02-4680.03

Outline of Parishes that make up the New Orleans MSA in Relationship to the South-east Louisiana Area

New Orleans MSA

Subject Property

EXHIBIT 1-C 02-4680.03

Census Tracts of Jefferson Parish and the West Bank (CMA)

West Bank (CMA)

Subject Property

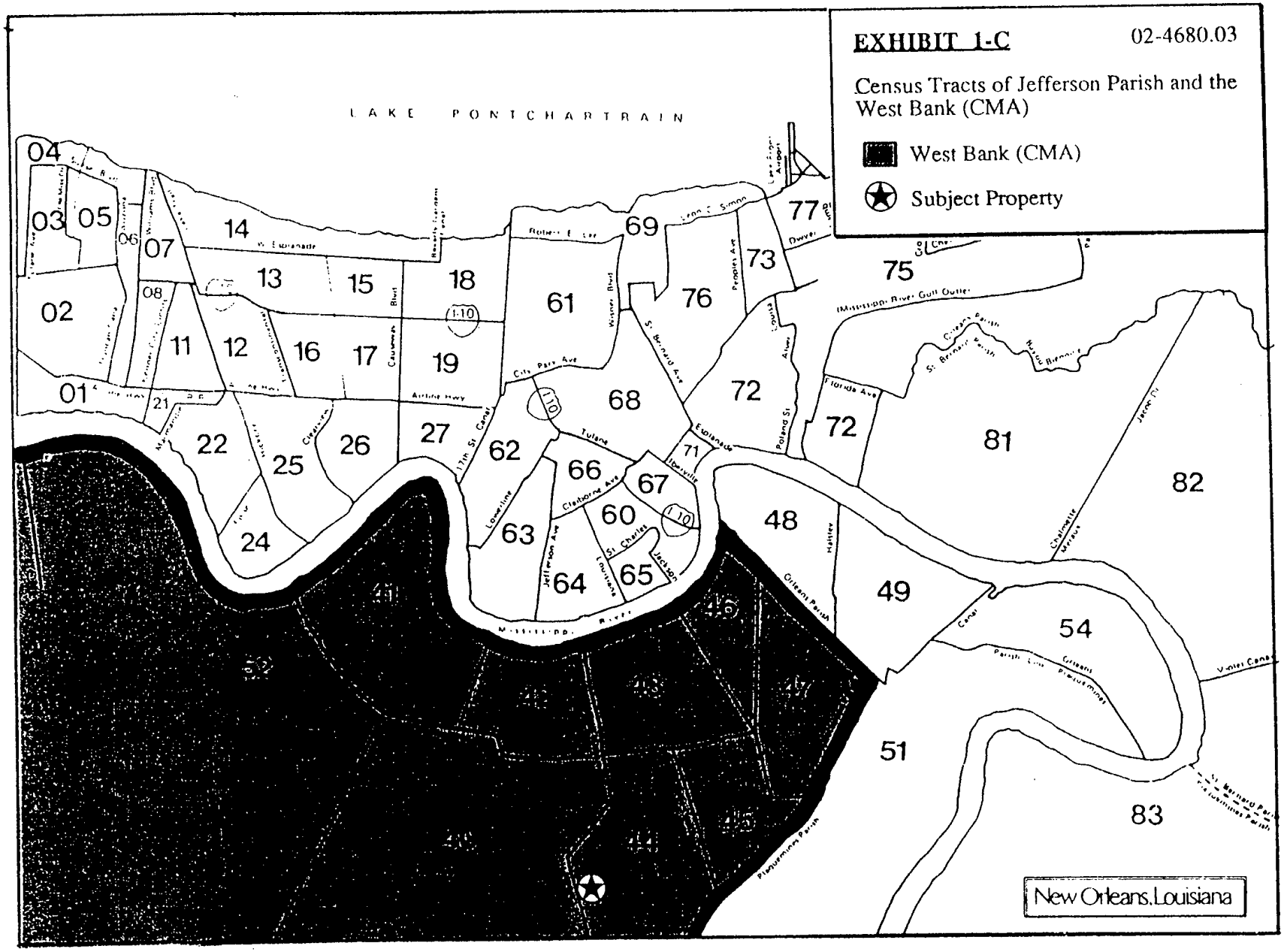


EXHIBIT 2
POPULATION AND HOUSEHOLD GROWTH TRENDS, 1980-1999
NEW ORLEANS MSA, JEFFERSON PARISH
AND THE WEST BANK CMA

	CENSUS 1980	CENSUS 1990	EST. 1994	PROJ. 1999	--Annual Number Change -- 1980-90	1990-94	1994-99	--Compound Annual Growth (%)-- 1980-90	1990-94	1994-99
NEW ORLEANS MSA /1										
Population	1,303,929	1,285,270	1,312,652	1,343,454	(1,866)	6,846	6,160	-0.1%	0.5%	0.5%
Households	453,030	469,823	482,400	498,032	1,679	3,144	3,126	0.4%	0.7%	0.6%
Household size	2.88	2.74	2.71	2.64						
JEFFERSON PARISH										
Population	454,594	448,306	463,398	480,125	(629)	3,773	3,345	-0.1%	0.8%	0.7%
Households	155,684	166,398	173,521	182,101	1,071	1,781	1,716	0.7%	1.0%	1.0%
Household size	2.92	2.69	2.63	2.57						
JEFFERSON PARISH AS A % OF NEW ORLEANS MSA										
Population	34.9%	34.9%	35.3%	35.7%	33.7%	55.1%	54.3%			
Households	34.4%	35.4%	36.0%	36.6%	63.8%	56.6%	54.9%			
WEST BANK CMA /2										
Population	158,295	166,626	178,631	192,145	833	3,001	2,703	0.5%	1.7%	1.4%
Households	50,902	56,702	61,094	66,282	580	1,098	1,038	1.1%	1.8%	1.6%
Household size	2.91	2.72	2.70	2.58						
WEST BANK CMA AS A % OF NEW ORLEANS MSA										
Population	12.1%	13.0%	13.6%	14.3%	-44.6%	43.8%	43.9%			
Households	11.2%	12.1%	12.7%	13.3%	34.5%	34.9%	33.2%			

1/ New Orleans Metropolitan Statistical Area (MSA), includes Jefferson, Orleans, St. Charles, St. John the Baptist, St. Bernard and St. Tammany Parishes.

2/ The West Bank Competitive Market Area (CMA), is defined as: Jefferson Parish South of the Mississippi River, North of Louisiana Highway 301, and East of the Bayou Signette and Dugues Canals.

SOURCE: Robert Charles Lesser & Co., U.S. Census Bureau, Claritas/NPDC

EXHIBIT 3

NONFARMING EMPLOYMENT GROWTH AND PROJECTIONS BY MAJOR INDUSTRY SECTOR FOR NEW ORLEANS, LOUISIANA MSA 1980-2000

MAJOR INDUSTRY GROUPS	Employment Numbers in Thousands														EST.	PROJ.	PROJ.	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1997	2000	1980-85	1985-90	1990-94	1994-97	1997-2000
NEW ORLEANS MSA																						
MINING/OTHER NONFRM.	26.82	29.97	30.21	27.84	28.40	28.36	23.61	21.79	22.00	21.26	20.61	21.39	19.14	16.51	16.54	17.06	17.52	0.31	-1.55	-1.02	0.17	0.15
CONSTRUCTION	51.89	51.40	49.33	48.23	47.83	40.10	35.77	31.22	31.57	31.17	34.44	31.32	31.20	30.53	31.11	33.68	35.42	-2.36	-1.13	-0.83	0.86	0.58
MANUFACTURING	67.78	68.68	63.50	56.12	54.23	52.29	49.43	47.70	49.44	49.99	50.41	52.04	51.38	48.78	49.04	48.95	47.87	-3.10	-0.38	-0.34	-0.03	-0.36
TRANS. COMM. & UTIL.	62.74	65.88	61.08	56.49	55.41	53.39	50.15	49.25	49.96	49.52	50.64	50.53	48.87	48.29	48.52	49.69	50.18	-1.87	-0.55	-0.53	0.39	0.16
WHOLESALE TRADE	43.91	45.07	43.03	40.37	39.95	39.36	37.09	35.01	35.44	35.99	34.80	35.29	34.68	35.68	35.95	37.12	38.05	-0.91	-0.91	0.29	0.39	0.31
RETAIL TRADE	107.54	109.56	110.59	112.01	120.98	120.64	120.26	119.71	118.36	119.13	119.60	119.08	122.27	125.63	128.04	136.57	143.66	2.62	-0.21	2.11	2.84	2.36
FIN., INS. & REAL EST.	49.83	50.50	52.00	51.19	52.19	52.74	52.92	52.14	52.90	50.45	49.17	47.55	4 82	43.83	44.43	46.67	48.51	0.58	-0.71	-1.19	0.75	0.61
SERVICES	157.10	163.37	172.14	174.87	182.88	185.24	185.14	185.14	194.38	198.77	208.97	210.06	214.59	223.76	227.84	242.03	254.45	5.63	4.75	4.72	4.73	4.14
GOVERNMENT	105.19	105.31	105.90	108.08	108.87	109.71	107.73	105.80	105.17	106.77	108.43	109.97	113.13	111.48	115.40	117.45	121.57	0.90	-0.26	1.74	0.68	1.37
TOTAL EMPLOYMENT	672.80	689.74	687.78	675.20	690.74	681.83	662.10	647.76	659.22	663.05	677.07	677.23	640.08	684.49	696.87	729.22	757.23	1.81	-0.95	4.95	10.78	9.34
ANNUAL CHANGE	-	16.94	-1.96	-12.58	15.54	-8.91	-19.73	-14.34	11.46	3.83	14.02	0.16	-37.15	44.41	12.38	29.71	9.34					

MAJOR INDUSTRY GROUPS	1980 % DIST.	1981 % DIST.	1982 % DIST.	1983 % DIST.	1984 % DIST.	1985 % DIST.	1986 % DIST.	1987 % DIST.	1988 % DIST.	1989 % DIST.	1990 % DIST.	1991 % DIST.	1992 % DIST.	1993 % DIST.	1994 % DIST.	1997 % DIST.	2000 % DIST.	ANN. % CHANGES 1980-85	ANN. % CHANGES 1985-90	ANN. % CHANGES 1990-94	ANN. % CHANGES 1994-97	ANN. % CHANGES 1997-2000
NEW ORLEANS MSA																						
MINING/OTHER NONFRM	4.0%	4.3%	4.4%	4.1%	4.1%	4.2%	3.6%	3.4%	3.3%	3.2%	3.0%	3.2%	3.0%	2.4%	2.4%	2.3%	2.3%	1.1%	-5.5%	-4.9%	1.0%	0.9%
CONSTRUCTION	7.7%	7.5%	7.2%	7.1%	6.9%	5.9%	5.4%	4.8%	4.8%	4.7%	5.1%	4.6%	4.9%	4.5%	4.5%	4.6%	4.7%	-4.5%	-2.8%	-2.4%	2.8%	1.7%
MANUFACTURING	10.1%	10.0%	9.2%	8.3%	7.9%	7.7%	7.5%	7.4%	7.5%	7.5%	7.4%	7.7%	8.0%	7.1%	7.0%	6.7%	6.3%	-4.6%	-0.7%	-0.7%	-0.1%	-0.7%
TRANS. COMM. & UTIL.	9.3%	9.6%	8.9%	8.4%	8.0%	7.8%	7.6%	7.6%	7.6%	7.5%	7.5%	7.5%	7.6%	7.1%	7.0%	6.8%	6.6%	-3.0%	-1.0%	-1.0%	0.8%	0.3%
WHOLESALE TRADE	6.5%	6.5%	6.3%	6.0%	5.8%	5.8%	5.6%	5.4%	5.4%	5.4%	5.1%	5.2%	5.4%	5.2%	5.2%	5.1%	5.0%	-2.1%	-2.3%	0.8%	1.1%	0.8%
RETAIL TRADE	16.0%	15.9%	16.1%	16.6%	17.5%	17.7%	18.2%	18.5%	18.0%	18.0%	17.7%	17.6%	19.1%	18.4%	18.4%	18.7%	19.0%	2.4%	-0.2%	1.8%	2.2%	1.7%
FIN., INS. & REAL EST.	7.4%	7.3%	7.6%	7.6%	7.6%	7.7%	8.0%	8.0%	8.0%	7.6%	7.3%	7.0%	0.8%	6.4%	6.4%	6.4%	6.4%	1.2%	-1.4%	-2.4%	1.7%	1.3%
SERVICES	23.4%	23.7%	25.0%	25.9%	26.5%	27.2%	28.0%	28.6%	29.5%	30.0%	30.9%	31.0%	33.5%	32.7%	32.7%	33 2%	33.6%	3.6%	2.6%	2.3%	2.1%	1.7%
GOVERNMENT	15.6%	15.3%	15.4%	16.0%	15.8%	16 1%	16.3%	16.3%	16.0%	16.1%	16.0%	16.2%	17.7%	16.3%	16.6%	16.1%	16.1%	0.9%	-0.2%	1.6%	0.6%	1.2%
TOTAL EMPLOYMENT	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100 0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.3%	-0.1%	0.7%	1.5%	1.3%

SOURCE: National Planning Association; University of New Orleans Division of Business and Economic Researc; Robert Charles Lesser & Co.

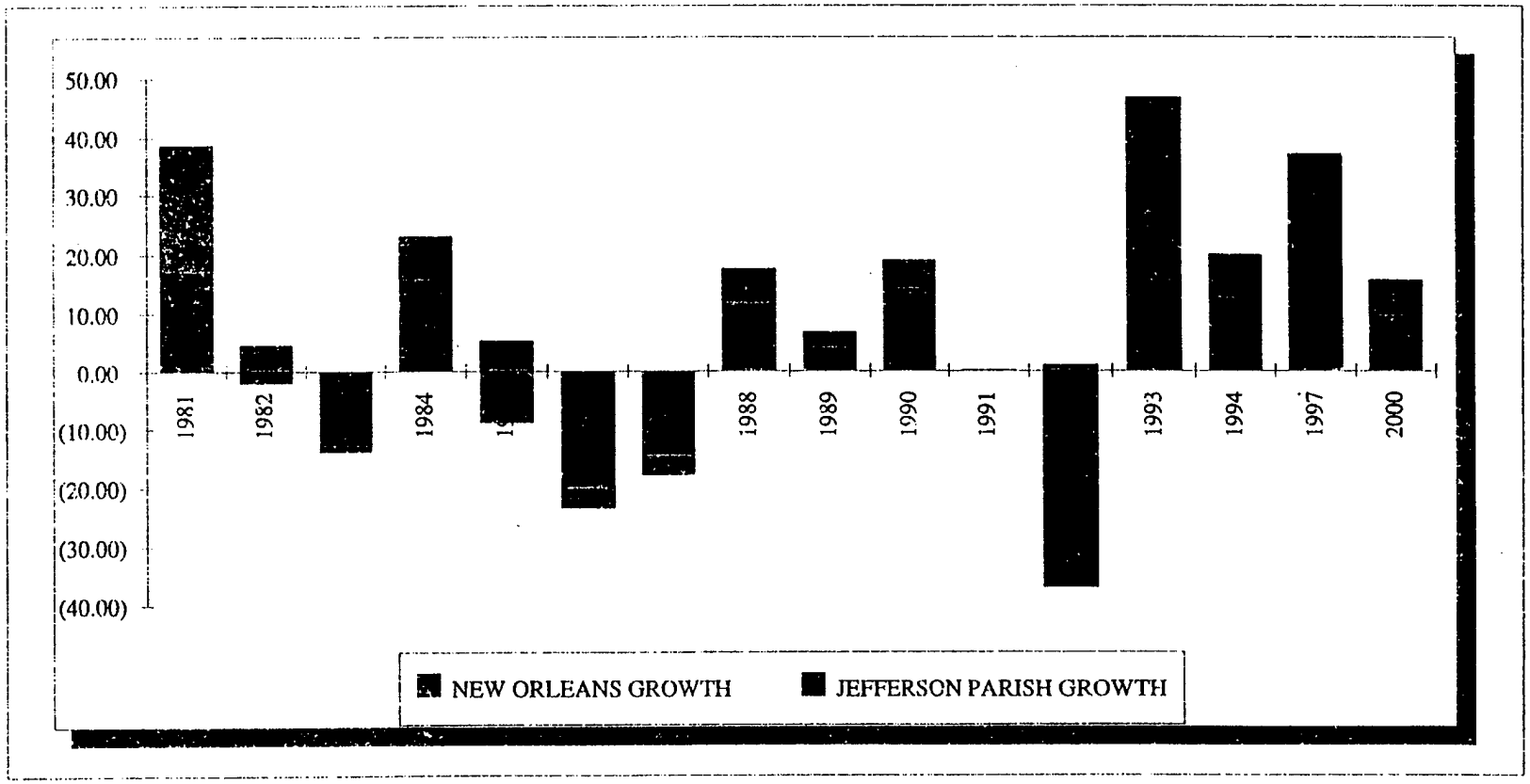
EXHIBIT 4
NONFARMING EMPLOYMENT GROWTH AND PROJECTIONS BY MAJOR INDUSTRY SECTOR FOR JEFFERSON PARISH, LOUISIANA 1980-2000

MAJOR INDUSTRY GROUPS	Employment Numbers in Thousands																	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	PROJ. 1997	PROJ. 2000	1980-85	1985-90	1990-94	1994-97	1997-2000
JEFFERSON PARISH																						
MINING/OTHER NONFRM.	4.92	5.93	6.28	5.60	5.98	6.34	4.75	4.32	4.17	3.27	2.94	3.25	2.94	2.54	2.46	2.31	2.21	0.28	-0.68	-0.12	-0.05	-0.03
CONSTRUCTION	17.95	19.36	18.52	18.07	18.24	17.06	16.20	14.30	14.05	13.42	14.48	12.27	12.23	12.02	12.27	13.31	13.98	-0.18	-0.52	-0.55	0.35	0.22
MANUFACTURING	19.31	20.40	17.89	15.41	14.55	14.69	14.44	15.13	17.01	17.82	17.73	18.91	18.65	17.59	17.45	17.45	17.15	-0.92	0.61	-0.07	0.00	-0.10
TRANS, COMM. & UTIL	14.77	17.21	17.12	16.36	16.24	16.01	15.15	14.67	14.63	14.37	14.99	14.69	14.21	14.08	14.40	15.41	16.06	0.25	-0.20	-0.15	0.34	0.22
WHOLESALE TRADE	13.44	14.60	16.80	15.96	16.79	17.15	16.07	14.82	15.43	16.10	15.86	16.34	16.06	16.54	17.13	18.89	20.28	0.74	-0.26	0.32	0.59	0.46
RETAIL TRADE	38.48	41.62	44.20	45.66	50.03	52.10	51.79	51.31	51.02	50.71	50.70	50.51	51.86	53.30	55.09	60.78	65.49	2.72	-0.28	1.10	1.90	1.57
FIN., INS. & REAL EST.	12.56	14.95	15.53	16.24	16.74	17.29	17.92	18.40	18.75	18.52	18.08	18.07	17.02	16.66	17.31	19.30	20.97	0.95	0.16	-0.19	0.66	0.56
SERVICES	36.51	45.34	46.99	47.89	50.27	53.23	54.28	54.62	59.34	62.08	66.48	67.11	68.53	71.49	74.52	84.47	93.28	3.34	2.65	2.01	3.32	2.94
GOVERNMENT	22.87	23.20	23.93	24.76	24.67	25.02	24.46	23.84	23.18	24.28	24.33	24.57	25.31	24.96	26.13	27.15	28.56	0.43	-0.14	0.45	0.34	0.47
TOTAL EMPLOYMENT	180.81	202.61	207.26	205.95	213.51	218.89	215.06	211.41	217.58	220.57	225.59	225.72	226.81	229.18	236.76	259.07	277.98	7.62	1.34	2.79	7.44	6.30
ANNUAL CHANGE	-	21.80	4.65	-1.31	7.56	5.38	-3.83	-3.65	6.17	2.99	5.02	0.13	1.09	2.37	7.58	7.44	6.30					

MAJOR INDUSTRY GROUPS	1980 % DIST.	1981 % DIST.	1982 % DIST.	1983 % DIST.	1984 % DIST.	1985 % DIST.	1986 % DIST.	1987 % DIST.	1988 % DIST.	1989 % DIST.	1990 % DIST.	1991 % DIST.	1992 % DIST.	1993 % DIST.	1994 % DIST.	1997 % DIST.	2000 % DIST.	ANN. % CHANGES 1980-85	ANN. % CHANGES 1985-90	ANN. % CHANGES 1990-94	ANN. % CHANGES 1994-97	ANN. % CHANGES 1997-2000
JEFFERSON PARISH																						
MINING/OTHER NONFRM.	2.7%	2.9%	3.0%	2.7%	2.8%	2.9%	2.2%	2.0%	1.9%	1.5%	1.3%	1.4%	1.3%	1.1%	1.0%	0.9%	0.8%	5.8%	-10.7%	-4.1%	-8.5%	-1.4%
CONSTRUCTION	9.9%	9.6%	8.9%	8.8%	8.5%	7.8%	7.5%	6.8%	6.5%	6.1%	6.4%	5.4%	5.4%	5.2%	5.2%	5.1%	5.0%	-1.0%	-3.0%	-3.8%	2.9%	1.7%
MANUFACTURING	10.7%	10.1%	8.6%	7.5%	6.8%	6.7%	6.7%	7.2%	7.8%	8.1%	7.9%	8.4%	8.2%	7.7%	7.4%	6.7%	6.2%	-4.8%	4.1%	-0.4%	-2.3%	-0.6%
TRANS, COMM. & UTIL.	8.2%	8.5%	8.3%	7.9%	7.6%	7.3%	7.0%	6.9%	6.7%	6.5%	6.6%	6.5%	6.3%	6.1%	6.1%	5.9%	5.8%	1.7%	-1.3%	-1.0%	2.8%	1.4%
WHOLESALE TRADE	7.4%	7.2%	8.1%	7.7%	7.9%	7.8%	7.5%	7.0%	7.1%	7.3%	7.0%	7.2%	7.1%	7.2%	7.2%	7.3%	7.3%	5.5%	-1.5%	2.0%	5.5%	2.5%
RETAIL TRADE	21.3%	20.5%	21.3%	22.2%	23.4%	23.8%	24.1%	24.3%	23.4%	23.0%	22.5%	22.4%	22.9%	23.3%	23.3%	23.5%	23.6%	7.1%	-0.5%	2.2%	5.4%	2.6%
FIN., INS. & REAL EST.	6.9%	7.4%	7.5%	7.9%	7.8%	7.9%	8.3%	8.7%	8.6%	8.4%	8.0%	8.0%	7.5%	7.3%	7.3%	7.4%	7.5%	7.5%	0.9%	-1.1%	4.4%	2.9%
SERVICES	20.2%	22.4%	22.7%	23.3%	23.5%	24.3%	25.2%	25.8%	27.3%	28.1%	29.5%	29.7%	30.2%	31.2%	31.5%	32.6%	33.6%	9.2%	5.0%	3.0%	7.1%	3.5%
GOVERNMENT	12.6%	11.5%	11.5%	12.0%	11.6%	11.4%	11.4%	11.3%	10.7%	11.0%	10.8%	10.9%	11.2%	10.9%	11.0%	10.5%	10.3%	1.9%	-0.6%	1.8%	2.3%	1.7%
TOTAL EMPLOYMENT	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	4.2%	0.6%	1.2%	4.5%	2.4%

SOURCE: U. S. Department of Commerce; National Planning Association; University of New Orleans Division of Business and Economic Research; Robert Charles Lesser & Co.

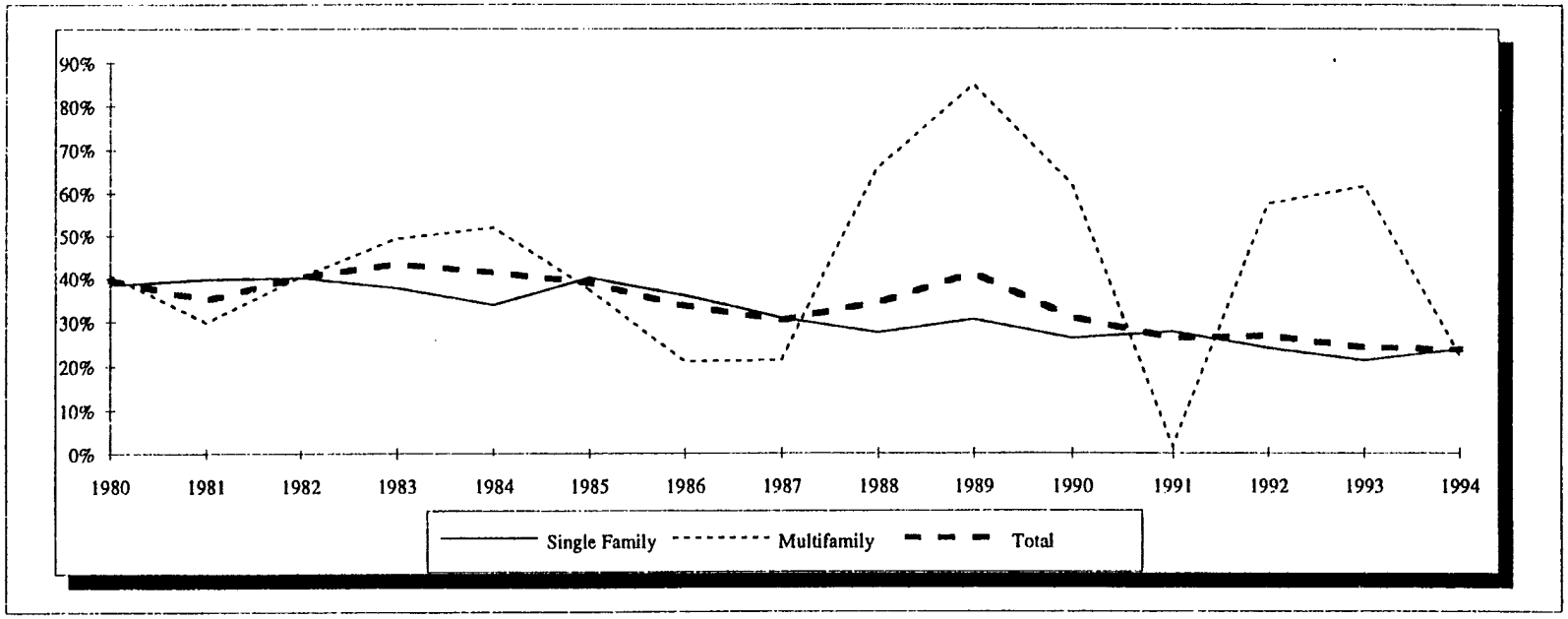
EXHIBIT 5
ANNUAL EMPLOYMENT GROWTH
NEW ORLEANS METROPOLITAN AREA, JEFFERSON PARISH; 1980-2000
(,000's)



SOURCE: U. S. Department of Commerce; University of New Orleans Division of Business and Economic Research; National Planning Association; Robert Charles Lesser & Co.

EXHIBIT 6
SINGLE FAMILY AND MULTIFAMILY UNITS AUTHORIZED BY BUILDING PERMITS
THE NEW ORLEANS MSA AND JEFFERSON PARISH
1980 THROUGH 1994

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994 1/
New Orleans MSA															
SFD	4,319	3,568	4,120	6,853	6,010	4,196	3,257	3,089	2,216	1,975	1,979	2,340	3,031	3,373	3,854
MF	3,604	3,328	2,461	6,452	4,181	3,110	603	189	481	470	303	140	261	260	372
Total	7,923	6,896	6,581	13,305	10,191	7,306	3,860	3,278	2,697	2,445	2,282	2,480	3,292	3,633	4,226
Jefferson Parish															
SFD	1,659	1,420	1,654	2,586	2,031	1,680	1,171	951	606	602	517	646	726	714	914
MF	1,469	992	992	3,181	2,167	1,160	126	40	316	399	188	2	150	160	82
Total	3,128	2,412	2,646	5,767	4,198	2,840	1,297	991	922	1,001	705	648	876	874	996
Jefferson as a % of MSA															
SFD	38.4%	39.8%	40.1%	37.7%	33.8%	40.0%	36.0%	30.8%	27.3%	30.5%	26.1%	27.6%	24.0%	21.2%	23.7%
MF	40.8%	29.8%	40.3%	49.3%	51.8%	37.3%	20.9%	21.2%	65.7%	84.9%	62.0%	1.4%	57.5%	61.5%	22.0%
Total	39.5%	35.0%	40.2%	43.3%	41.2%	38.9%	33.6%	30.2%	34.2%	40.9%	30.9%	26.1%	26.6%	24.1%	23.6%



1/ 1994 permits are the first six months of 1994 annualized.

SOURCE: Robert Charles Lesser & Co. based on information obtained from the U.S. Census Bureau Department of Construction Statistics.

EXHIBIT 7

HOUSEHOLD INCOME DISTRIBUTIONS BY AGE GROUP
NEW ORLEANS MSA, JEFFERSON PARISH, AND THE WEST BANK COMPETIVE MARKET AREA (CMA)
1990 - 1999

NEW ORLEANS MSA, 1990

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	238,945	18,268	43,801	28,499	31,893	64,375
$25,000 - $34,999	71,036	3,115	17,858	11,210	9,318	10,797
$35,000 - $49,999	72,994	1,944	21,337	13,417	9,788	8,534
$50,000 - $74,999	55,554	745	17,878	12,653	7,852	5,298
$75,000 - $99,999	16,297	169	5,261	4,344	2,604	1,493
$100,000 - $149,999	9,064	51	2,705	2,523	1,581	1,176
$150,000 Or Greater	5,933	50	1,660	1,650	1,082	935
	469,823	24,342	110,500	74,296	64,118	92,608

NEW ORLEANS MSA, 1994

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
210,564	41,906	39,237	28,024	27,234	61,515
70,578	16,631	17,043	11,590	9,002	12,852
76,509	17,913	21,141	14,817	9,785	10,251
74,410	15,690	23,269	16,864	9,459	7,667
27,406	4,723	8,953	7,012	3,785	2,622
15,241	1,932	4,816	4,561	2,371	1,436
7,692	662	2,266	2,304	1,344	1,070
482,400	99,457	116,725	85,172	62,980	97,413

PERCENT DISTRIBUTION

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	50.9%	75.0%	39.6%	38.4%	49.7%	69.5%
$25,000 - $34,999	15.1%	12.8%	16.2%	15.1%	14.5%	11.7%
$35,000 - $49,999	15.5%	8.0%	19.3%	18.1%	15.3%	9.2%
$50,000 - $74,999	11.8%	3.1%	16.2%	17.0%	12.2%	5.7%
$75,000 - $99,999	3.5%	0.7%	4.8%	5.8%	4.1%	1.6%
$100,000 - $149,999	1.9%	0.2%	2.4%	3.4%	2.5%	1.3%
$150,000 Or Greater	1.3%	0.2%	1.5%	2.2%	1.7%	1.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

PERCENT DISTRIBUTION

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
43.6%	42.1%	33.6%	32.9%	43.2%	63.1%
14.6%	16.7%	14.6%	13.6%	14.3%	13.2%
15.9%	18.0%	18.1%	17.4%	15.5%	10.5%
15.4%	15.8%	19.9%	19.8%	15.0%	7.9%
5.7%	4.7%	7.7%	8.2%	6.0%	2.7%
3.2%	1.9%	4.1%	5.4%	3.8%	1.5%
1.6%	0.7%	1.9%	2.7%	2.1%	1.1%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

ANNUAL CHANGE 1990-1994

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	-7,095	5,910	-1,141	-119	-1,165	-715
$25,000 - $34,999	-115	3,379	-204	95	-79	514
$35,000 - $49,999	879	3,992	-49	350	-1	429
$50,000 - $74,999	4,714	3,736	1,348	1,053	402	592
$75,000 - $99,999	2,777	1,139	923	667	295	282
$100,000 - $149,999	1,544	470	528	510	198	65
$150,000 Or Greater	440	153	152	164	66	34
	3,144	18,779	1,556	2,719	-285	1,201

COMPOUND ANNUAL CHANGE 1990-1994

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
-13.0%	89.2%	-10.6%	-2.2%	-16.0%	-4.2%
-0.2%	52.0%	-1.2%	0.8%	-0.9%	4.5%
1.2%	74.2%	-0.2%	2.5%	0.0%	4.7%
7.6%	114.2%	6.8%	7.4%	4.8%	9.7%
13.9%	129.9%	14.2%	12.7%	9.8%	15.1%
13.9%	148.1%	15.5%	16.0%	10.7%	5.1%
26.9%	299.5%	33.4%	33.4%	21.7%	16.6%
0.7%	42.2%	1.4%	3.5%	-0.4%	1.3%

EXHIBIT 7

HOUSEHOLD INCOME DISTRIBUTIONS BY AGE GROUP
NEW ORLEANS MSA, JEFFERSON PARISH, AND THE WEST BANK COMPETIVE MARKET AREA (CMA)
1990 - 1999

NEW ORLEANS MSA, 1999

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	184,974	31,406	34,787	28,263	24,744	52,470
$25,000 - $34,999	67,675	13,452	15,961	12,407	8,799	13,433
$35,000 - $49,999	77,368	15,577	20,574	16,063	10,215	11,886
$50,000 - $74,999	87,242	16,609	26,239	20,970	11,283	9,926
$75,000 - $99,999	42,069	7,372	13,642	11,012	5,362	4,007
$100,000 - $149,999	27,009	3,709	853	7,988	3,773	2,428
$150,000 Or Greater	11,695	1,001	3,636	3,893	1,844	1,249
	498,032	89,126	115,692	100,596	66,020	95,399

PERCENT DISTRIBUTION

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	37.1%	35.2%	30.1%	28.1%	37.5%	55.0%
$25,000 - $34,999	13.6%	15.1%	13.8%	12.3%	13.3%	14.1%
$35,000 - $49,999	15.5%	17.5%	17.8%	16.0%	15.5%	12.5%
$50,000 - $74,999	17.5%	18.6%	22.7%	20.8%	17.1%	10.4%
$75,000 - $99,999	8.4%	8.3%	11.8%	10.9%	8.1%	4.2%
$100,000 - $149,999	5.4%	4.2%	0.7%	7.9%	5.7%	2.5%
$150,000 Or Greater	2.3%	1.1%	3.1%	3.9%	2.8%	1.3%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

ANNUAL CHANGE 1994-1999

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	-5,118	-2,100	-890	48	-498	-1,809
$25,000 - $34,999	-581	-636	-216	163	-41	116
$35,000 - $49,999	172	-467	-113	249	86	327
$50,000 - $74,999	2,566	184	594	821	365	452
$75,000 - $99,999	2,933	530	938	800	315	277
$100,000 - $149,999	2,354	355	-793	685	280	198
$150,000 Or Greater	801	68	274	318	100	36
	3,126	-2,066	-207	3,085	608	-403

COMPOUND ANNUAL CHANGE 1994-1999

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	-11.3%	-22.5%	-10.0%	-0.3%	-8.8%	-15.4%
$25,000 - $34,999	-0.8%	-4.2%	-1.3%	1.4%	-0.5%	0.9%
$35,000 - $49,999	0.2%	-2.8%	-0.5%	1.6%	0.9%	3.0%
$50,000 - $74,999	3.2%	1.1%	2.4%	4.5%	3.6%	5.3%
$75,000 - $99,999	8.9%	9.3%	8.8%	9.4%	7.2%	8.9%
$100,000 - $149,999	12.1%	13.9%	-29.3%	11.9%	9.7%	11.1%
$150,000 Or Greater	25.8%	19.0%	29.7%	32.4%	20.2%	11.7%
	0.6%	-2.2%	-0.2%	3.4%	0.9%	-0.4%

EXHIBIT 7

HOUSEHOLD INCOME DISTRIBUTIONS BY AGE GROUP
NEW ORLEANS MSA, JEFFERSON PARISH, AND THE WEST BANK COMPETIVE MARKET AREA (CMA)
1990 - 1999

JEFFERSON PARISH, 1990

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	73,445	16,906	13,426	8,742	9,499	18,954
$25,000 - $34,999	28,900	7,892	7,442	4,425	3,727	4,176
$35,000 - $49,999	30,152	7,521	8,775	5,958	4,055	3,005
$50,000 - $74,999	22,652	4,520	6,772	5,565	3,578	1,913
$75,000 - $99,999	6,318	967	1,900	1,783	1,062	562
$100,000 - $149,999	3,126	326	922	932	534	394
$150,000 Or Greater	1,805	157	649	488	296	204
	166,398	38,289	39,886	27,893	22,751	29,208

JEFFERSON PARISH, 1994

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
63,989	13,487	11,890	8,452	7,940	17,272
27,729	6,736	6,686	4,541	3,450	4,787
31,306	7,440	8,595	6,264	4,015	3,943
31,103	6,587	9,372	7,510	4,106	2,888
11,129	1,942	3,378	3,065	1,696	931
5,705	737	1,722	1,778	905	528
2,560	205	875	768	425	275
173,521	37,134	42,518	32,378	22,537	30,624

PERCENT DISTRIBUTION

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	44.1%	44.2%	33.7%	31.3%	41.8%	64.9%
$25,000 - $34,999	17.4%	20.6%	18.7%	15.9%	16.4%	14.3%
$35,000 - $49,999	18.1%	19.6%	22.0%	21.4%	17.8%	10.3%
$50,000 - $74,999	13.6%	11.8%	17.0%	20.0%	15.7%	6.5%
$75,000 - $99,999	3.8%	2.5%	4.8%	6.4%	4.7%	1.9%
$100,000 - $149,999	1.9%	0.9%	2.3%	3.3%	2.3%	1.3%
$150,000 Or Greater	1.1%	0.4%	1.6%	1.7%	1.3%	0.7%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

PERCENT DISTRIBUTION

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
36.9%	36.3%	28.0%	26.1%	35.2%	56.4%
16.0%	18.1%	15.7%	14.0%	15.3%	15.6%
18.0%	20.0%	20.2%	19.3%	17.8%	12.9%
17.9%	17.7%	22.0%	23.2%	18.2%	9.4%
6.4%	5.2%	7.9%	9.5%	7.5%	3.0%
3.3%	2.0%	4.1%	5.5%	4.0%	1.7%
1.5%	0.6%	2.1%	2.4%	1.9%	0.9%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

ANNUAL CHANGE 1990-1994

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	-2,364	-855	-384	-73	-390	-421
$25,000 - $34,999	-293	-289	-189	29	-69	153
$35,000 - $49,999	289	-20	-45	77	-10	235
$50,000 - $74,999	2,113	517	650	486	132	244
$75,000 - $99,999	1,203	244	370	321	159	92
$100,000 - $149,999	645	103	200	212	93	34
$150,000 Or Greater	189	12	57	70	32	18
	1,781	-289	658	1,121	-54	354

COMPOUND ANNUAL CHANGE 1990-1994

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
-14.9%	-22.3%	-12.0%	-3.5%	-18.5%	-11.8%
-1.0%	-3.9%	-2.6%	0.6%	-1.9%	3.5%
0.9%	-0.3%	-0.5%	1.3%	-0.2%	7.0%
8.2%	9.9%	8.5%	7.8%	3.5%	10.8%
15.2%	19.0%	15.5%	14.5%	12.4%	13.4%
16.2%	22.6%	16.9%	17.5%	14.1%	7.6%
34.9%	19.1%	31.5%	47.6%	37.6%	27.5%
1.1%	-0.8%	1.6%	3.8%	-0.2%	1.2%

EXHIBIT 7

HOUSEHOLD INCOME DISTRIBUTIONS BY AGE GROUP
NEW ORLEANS MSA, JEFFERSON PARISH, AND THE WEST BANK COMPETIVE MARKET AREA (CMA)
1990 - 1999

JEFFERSON PARISH, 1999

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	55,222	9,906	10,364	8,292	7,168	14,760
$25,000 - $34,999	26,045	5,405	6,103	4,676	3,247	5,014
$35,000 - $49,999	31,891	6,622	8,392	6,736	4,162	4,616
$50,000 - $74,999	36,624	7,038	10,772	9,158	4,869	3,842
$75,000 - $99,999	17,338	3,018	5,348	4,752	2,359	1,559
$100,000 - $149,999	10,878	1,494	3,372	3,390	1,644	883
$150,000 Or Greater	4,103	362	1,345	1,371	620	383
	182,101	33,845	45,696	38,375	24,069	31,057

PERCENT DISTRIBUTION

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
30.3%	29.3%	22.7%	21.6%	29.8%	47.5%
14.3%	16.0%	13.4%	12.2%	13.5%	16.1%
17.5%	19.6%	18.4%	17.6%	17.3%	14.9%
20.1%	20.8%	23.6%	23.9%	20.2%	12.4%
9.5%	8.9%	11.7%	12.4%	9.8%	5.0%
6.0%	4.4%	7.4%	8.8%	6.8%	2.8%
2.3%	1.1%	2.9%	3.6%	2.6%	1.2%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

ANNUAL CHANGE 1994-1999

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	-1,753	-716	-305	-32	-154	-502
$25,000 - $34,999	-337	-266	-117	27	-41	45
$35,000 - $49,999	117	-164	-41	94	29	135
$50,000 - $74,999	1,104	90	280	330	153	191
$75,000 - $99,999	1,242	215	394	337	133	126
$100,000 - $149,999	1,035	151	330	322	148	71
$150,000 Or Greater	309	31	94	121	39	22
	1,716	-658	636	1,199	306	87

COMPOUND ANNUAL CHANGE 1994-1999

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
-12.3%	-23.7%	-10.2%	-1.8%	-9.2%	-14.3%
-1.2%	-4.3%	-1.8%	0.6%	-1.2%	0.9%
0.4%	-2.3%	-0.5%	1.5%	0.7%	3.2%
3.3%	1.3%	2.8%	4.0%	3.5%	5.9%
9.3%	9.2%	9.6%	9.2%	6.8%	10.9%
13.8%	15.2%	14.4%	13.8%	12.7%	10.8%
30.4%	28.7%	27.8%	38.1%	27.1%	21.9%
1.0%	-1.8%	1.5%	3.5%	1.3%	0.3%

EXHIBIT 7

HOUSEHOLD INCOME DISTRIBUTIONS BY AGE GROUP
NEW ORLEANS MSA, JEFFERSON PARISH, AND THE WEST BANK COMPETIVE MARKET AREA (CMA)
1990 - 1999

WEST BANK CMA, 1990

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	27,735	6,972	5,770	3,517	3,483	5,776
$25,000 - $34,999	9,889	2,930	2,798	1,548	1,114	1,041
$35,000 - $49,999	9,696	2,478	3,063	2,111	1,198	576
$50,000 - $74,999	6,966	1,426	2,345	1,757	915	380
$75,000 - $99,999	1,658	243	551	512	271	62
$100,000 - $149,999	555	58	142	197	95	49
$150,000 Or Greater	193	14	36	62	43	23
	56,692	14,121	14,705	9,704	7,119	7,907

WEST BANK CMA, 1994

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
25,495	5,899	5,428	3,624	3,103	5,590
10,091	2,584	2,721	1,763	1,160	1,262
10,544	2,701	3,193	2,229	1,198	884
10,143	2,236	3,380	2,605	1,150	542
3,128	580	1,071	885	408	142
1,386	178	449	471	204	72
309	25	75	101	71	35
61,096	14,203	16,317	11,678	7,294	8,527

PERCENT DISTRIBUTION

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	48.9%	49.4%	39.2%	36.2%	48.9%	73.0%
$25,000 - $34,999	17.4%	20.7%	19.0%	16.0%	15.6%	13.2%
$35,000 - $49,999	17.1%	17.5%	20.8%	21.8%	16.8%	7.3%
$50,000 - $74,999	12.3%	10.1%	15.9%	18.1%	12.9%	4.8%
$75,000 - $99,999	2.9%	1.7%	3.7%	5.3%	3.8%	0.8%
$100,000 - $149,999	1.0%	0.4%	1.0%	2.0%	1.3%	0.6%
$150,000 Or Greater	0.3%	0.1%	0.2%	0.6%	0.6%	0.3%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

PERCENT DISTRIBUTION

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
41.7%	41.5%	33.3%	31.0%	42.5%	65.6%
16.5%	18.2%	16.7%	15.1%	15.9%	14.8%
17.3%	19.0%	19.6%	19.1%	16.4%	10.4%
16.6%	15.7%	20.7%	22.3%	15.8%	6.4%
5.1%	4.1%	6.6%	7.6%	5.6%	1.7%
2.3%	1.3%	2.8%	4.0%	2.8%	0.8%
0.5%	0.2%	0.5%	0.9%	1.0%	0.4%
100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

ANNUAL CHANGE 1990-1994

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	-560	-268	-86	27	-95	-47
$25,000 - $34,999	51	-87	-19	54	12	55
$35,000 - $49,999	212	56	33	30	0	77
$50,000 - $74,999	794	203	259	212	59	41
$75,000 - $99,999	368	84	130	93	34	20
$100,000 - $149,999	208	30	77	69	27	6
$150,000 Or Greater	29	3	10	10	7	3
	1,101	21	403	494	44	155

COMPOUND ANNUAL CHANGE 1990-1994

Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
-9.1%	-16.7%	-5.9%	3.1%	-12.5%	-4.6%
0.5%	-3.1%	-0.7%	3.3%	1.0%	4.9%
2.1%	2.2%	1.0%	1.4%	0.0%	11.3%
9.8%	11.9%	9.6%	10.3%	5.9%	9.3%
17.2%	24.3%	18.1%	14.7%	10.8%	23.0%
25.7%	32.4%	33.3%	24.3%	21.1%	10.1%
63.8%	47.4%	36.5%	62.0%	71.3%	67.6%
1.9%	0.1%	2.6%	4.7%	0.6%	1.9%

EXHIBIT 7

HOUSEHOLD INCOME DISTRIBUTIONS BY AGE GROUP

NEW ORLEANS MSA, JEFFERSON PARISH, AND THE WEST BANK COMPETIVE MARKET AREA (CMA)

1990 - 1999

WEST BANK CMA, 1999

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	23,418	1,625	5,055	3,791	3,017	5,309
$25,000 - $34,999	10,165	670	2,695	1,982	1,188	1,383
$35,000 - $49,999	11,475	492	3,354	2,631	1,348	1,133
$50,000 - $74,999	12,199	308	4,071	3,209	1,396	714
$75,000 - $99,999	5,420	104	1,863	1,550	614	256
$100,000 - $149,999	2,977	34	1,030	959	390	126
$150,000 Or Greater	631	5	195	238	88	44
	66,285	3,238	18,263	14,360	8,041	8,965

PERCENT DISTRIBUTION

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	35.3%	50.2%	27.7%	26.4%	37.5%	59.2%
$25,000 - $34,999	15.3%	20.7%	14.8%	13.8%	14.8%	15.4%
$35,000 - $49,999	17.3%	15.2%	18.4%	18.3%	16.8%	12.6%
$50,000 - $74,999	18.4%	9.5%	22.3%	22.3%	17.4%	8.0%
$75,000 - $99,999	8.2%	3.2%	10.2%	10.8%	7.6%	2.9%
$100,000 - $149,999	4.5%	1.1%	5.6%	6.7%	4.9%	1.4%
$150,000 Or Greater	1.0%	0.2%	1.1%	1.7%	1.1%	0.5%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

ANNUAL CHANGE 1994-1999

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	-415	-855	-75	33	-17	-56
$25,000 - $34,999	15	-383	-5	44	6	24
$35,000 - $49,999	186	-442	32	80	30	50
$50,000 - $74,999	411	-386	138	121	49	34
$75,000 - $99,999	458	-95	158	133	41	23
$100,000 - $149,999	318	-29	116	98	37	11
$150,000 Or Greater	64	-4	24	27	3	2
	1,038	-2,193	389	536	149	88

COMPOUND ANNUAL CHANGE 1994-1999

Income Ranges	Total Households	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Less Than $25,000	-7.0%	-88.9%	-4.9%	3.4%	-3.5%	-5.6%
$25,000 - $34,999	0.1%	-23.7%	-0.2%	2.4%	0.5%	1.8%
$35,000 - $49,999	1.7%	-28.9%	1.0%	3.4%	2.4%	5.1%
$50,000 - $74,999	3.8%	-32.7%	3.8%	4.3%	4.0%	5.7%
$75,000 - $99,999	11.6%	-29.1%	11.7%	11.9%	8.5%	12.5%
$100,000 - $149,999	16.5%	-28.2%	18.1%	15.3%	13.8%	11.8%
$150,000 Or Greater	40.9%	-58.2%	37.3%	48.6%	22.5%	13.4%
	1.6%	-25.6%	2.3%	4.2%	2.0%	1.0%

SOURCE: Robert Charles Lesser & Co. based on information obtained from Claritas/NPDC

HomPric:Overview

EXHIBIT 8
SINGLE-FAMILY HOME PRICE ANALYSIS
BASED ON APPRAISED VALUE OF INVENTORY
BY PARISH AND SELECTED NEIGHBORHOODS, NEW ORLEANS, LA
1987 - 1993

PARISH	1987 AVERAGE HOME PRICE	1988 AVERAGE HOME PRICE	1988-87 PERCENT CHANGE	1989 AVERAGE HOME PRICE	1989-88 PERCENT CHANGE	1990 AVERAGE HOME PRICE	1990-89 PERCENT CHANGE	1991 AVERAGE HOME PRICE	1991-90 PERCENT CHANGE	1992 AVERAGE HOME PRICE	1992-91 PERCENT CHANGE	1993 AVERAGE HOME PRICE	1993-92 PERCENT CHANGE
ORLEANS	$83,738	$83,236	-0.6%	$94,144	13.1%	$94,514	0.4%	$90,643	-4.1%	$99,252	9.5%	$104,085	4.9%
Lakeshore	$172,158	$170,033	-1.2%	$191,528	12.6%	$182,679	-4.6%	$181,238	-0.8%	$182,096	0.5%	$191,764	5.3%
Magazine	$175,143	$153,674	-12.3%	$175,060	13.9%	$199,597	14.0%	$186,808	-6.4%	$131,218	-29.8%	$187,731	43.1%
University	$199,825	$216,294	8.2%	$260,073	20.2%	$214,974	-17.3%	$228,467	6.3%	$205,518	-10.0%	$190,103	-7.5%
Fountainbleau	$131,638	$122,422	-7.0%	$131,104	7.1%	$145,841	11.2%	$133,069	-8.8%	$103,353	-22.3%	$111,619	8.0%
Garden District	$155,000	$178,381	15.4%	$193,787	8.3%	$157,563	-18.7%	$195,923	24.3%	$186,985	-4.6%	$149,557	-20.0%
Lakewood	$133,667	$121,847	-8.8%	$140,334	15.2%	$144,997	3.3%	$171,320	18.2%	$135,281	-21.0%	$130,051	-3.9%
JEFFERSON	$82,152	$79,662	-3.0%	$83,408	4.7%	$85,397	2.4%	$88,039	3.1%	$94,374	7.2%	$100,791	6.8%
Marrero South, Orleans Village, Estelle	$67,133	$58,842	-12.4%	$64,333	9.3%	$66,558	3.5%	$65,376	-1.8%	$70,151	7.3%	$66,745	-4.9%
Old Metarie	$115,736	$139,469	20.5%	$149,004	6.8%	$144,460	-3.0%	$167,164	15.7%	$143,539	-14.1%	$168,324	17.3%
ST. BERNARD	$64,147	$60,981	-4.9%	$61,484	0.8%	$62,398	1.5%	$63,397	1.6%	$66,847	5.4%	$66,526	-0.5%
ST. CHARLES	$95,566	$108,558	13.6%	$127,465	17.4%	$130,076	2.0%	$115,775	-11.0%	$99,200	-14.3%	$108,535	9.4%
Ormond	$96,173	$111,805	16.3%	$129,857	16.1%	$131,298	1.1%	$118,757	-9.6%	$102,769	-13.5%	$113,257	10.2%
ST. JOHN	$64,724	$65,287	0.9%	$63,125	-3.3%	$65,359	3.5%	$65,359	0.0%	$69,742	6.7%	$68,835	-1.3%
ST. TAMMANY	$85,480	$84,729	-0.9%	$86,658	2.3%	$84,537	-2.4%	$84,969	0.5%	$107,746	26.8%	$115,148	6.9%
Mandeville, Abita Springs	$141,621	$116,089	-18.0%	$113,860	-1.9%	$113,960	0.1%	$108,621	-4.7%	$130,013	19.7%	$130,380	0.3%
METRO AREA	$89,525	$87,125	-2.7%	$86,915	-0.2%	87,720	0.9%	$87,129	-0.7%	$94,879	8.9%	$101,073	6.5%

Note: The Subject Propoerty is within the Marrero South, Orleans Village, and Estelle area.

Source: University of New Orleans, Robert Charles Lesser & Co.

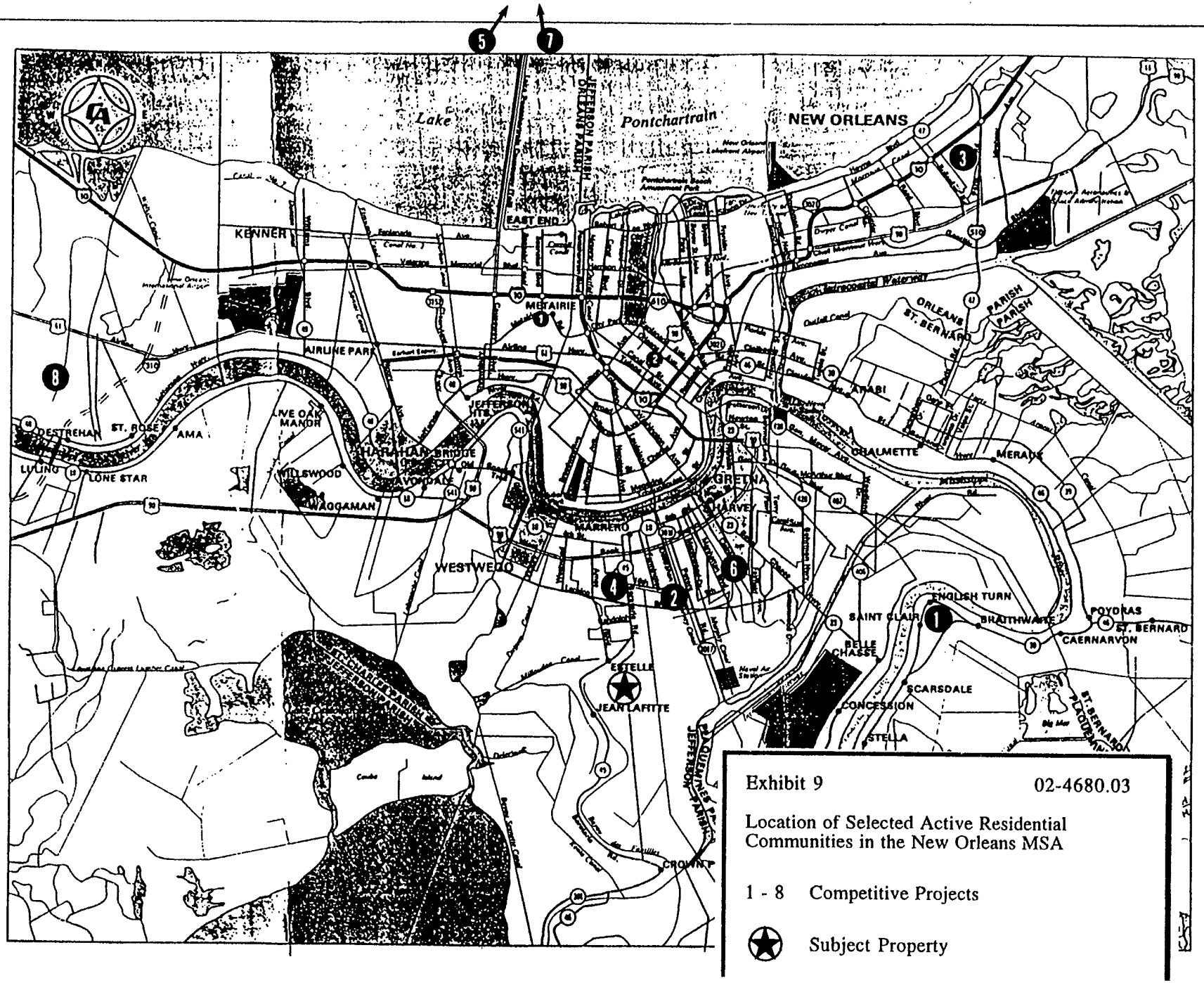


Exhibit 9 02-4680.03

Location of Selected Active Residential Communities in the New Orleans MSA

1 - 8 Competitive Projects

★ Subject Property

ROBERT CHARLES LESSER & CO.

EXHIBIT 10
SUMMARY OF SELECTED ACTIVE RESIDENTIAL COMMUNITIES
NEW ORLEANS METROPOLITAN REGION

MAP KEY	PROJECT NAME	1/ PRODUCT TYPE	LOT PRICE RANGE	LOT SIZE RANGE	AVG. LOT FRONT-AGE	LOCATION	ORIENTATION	DATE PRO-JECT BEGAN	TOTAL HOMES PLAN-NED	TOTAL HOMES OFF-ERED	TOTAL LOTS/ HOMES SOLD	MO. SELL.	AVG. LOTS/ HOMES SOLD/ MONTH	2/ CUR. LOTS/ HOMES SOLD/ MONTH	REMAIN-ING HOME INVENT-ORY	3/ POT-ENTIAL MONTHS INV-ENTORY	AVER-AGE HOME PRICE
ENGLISH TURN																	
	THE ESTATES PHASE I	SFD	$99,100 - $160,000	14,692 - 45,213	85	WEST BANK	GOLF	Oct-88	44	44	38	72	0.5	0.2	6	11	$650,000
	THE ESTATES PHASE I	SFD	$99,500 - $220,000	13,500 - 40,131	100	WEST BANK	INTERIOR	Oct-88	68	68	51	72	0.7	0.0	17	24	$350,000
	THE ESTATES PHASE II	SFD	$160,000 - $192,000	15,640 - 26,840	150	WEST BANK	GOLF	Jan-90	20	20	3	57	0.1	0.0	17	323	$625,000
	THE ESTATES PHASE II	SFD	$90,000 - $120,000	21,600 - 33,970	90	WEST BANK	INTERIOR	Jan-90	25	25	12	57	0.2	0.2	13	62	$375,000
	THE PLANTATIONS	SFD	$125,000 - $188,000	23,948 - 51,268	160	WEST BANK	INTERIOR	Jun-91	24	24	14	41	0.3	0.3	10	29	$400,000
	THE VILLAS	CLS	$45,000 - $55,000	9,860 - 11,640	70	WEST BANK	GOLF	Jun-92	20	20	15	29	0.5	0.7	5	10	$230,000
	CORPORATE VILLAS	CLS	$190,000 - $220,000	20,000 - 25,000	85	WEST BANK	GOLF	Oct-90	4	4	1	48	0.0	0.0	3	144	$400,000
	THE LAKES PHASE I	SFD	$148,000 - $190,000	19,490 - 33,550	110	WEST BANK	GOLF/LAKE	Sep-92	13	13	6	24	0.3	0.2	7	28	$400,000
	THE LAKES PHASE II	SFD	$75,000 - $96,000	12,614 - 22,033	85	WEST BANK	INTERIOR	Jan-93	23	23	13	21	0.6	1.0	10	16	$230,000
	THE LAKES PHASE III	SFD	$70,500 - $95,000	13,850 - 23,680	85	WEST BANK	INTERIOR	Jan-93	22	22	12	21	0.6	0.8	10	18	$260,000
	THE MANORS	SFD	$275,000 - $275,000	135,750 - 168,692	425	WEST BANK	INTERIOR	Jan-94	6	6	5	9	0.6	0.5	1	2	N/A
	REMAINING PARCELS	SFD							484						484		
		Subtotal							753	269	170		4.4	3.8	583	133	$393,000
		Average		35,600	108								0.5	0.3			
BARKLEY ESTATES																	
	PHASE I	SFD	$35,000 - $55,000	9,000 - 12,000	80	WEST BANK	IN-FILL AREA	Jul-94	115	115	9 Homes	3	3.0	3.0	106	35	$215,000
	PHASES II-III	SFD						Nov-94	301		90 Lots				301		$225,000
		Subtotal							416	115	9		3.0	3.0	407	136	$215,000
		Average		10,500	80								3.0	3.0			
EASTOVER																	
	EASTOVER	SFD	$63,000 - $72,500	16,000 - 18,000	100	NEW ORLEANS	INTERIOR	Sep-87	28	28	9	85	0.1	0.2	19	179	$275,000
	EASTOVER	SFD	$67,500 - $73,000	14,500 - 16,000	95	NEW ORLEANS	GOLF	Sep-87	55	55	29	85	0.3	0.5	26	76	$400,000
	EASTOVER	SFD	$65,000 - $85,000	15,000 - 19,000	100	NEW ORLEANS	LAKE	Sep-87	85	85	66	85	0.8	1.0	19	24	$450,000
	EASTOVER	SFD	$71,500 - $78,000	16,000 - 17,000	95	NEW ORLEANS	LAKE/GOLF	Sep-87	10	10	10	85	0.5	N/A	0	0	$450,000
	EASTOVER	SFD	$67,500 - $70,000	16,200 - 18,700	105	NEW ORLEANS	DRIVING RANGE	Sep-87	13	13	6	85	0.1	0.0	7	99	$260,000
	EASTOVER	SFD	$75,000 - $75,000	15,100 - 18,000	100	NEW ORLEANS	OPEN SPACE	Sep-87	13	13	7	85	0.1	0.2	6	73	$275,000
	PINEHURST COURT	CLUSTER	$45,000 - $45,000	7,500 - 10,000	70	NEW ORLEANS	GOLF	Oct-91	14	14	14	36	0.4	0.7	0	0	$200,000
	EASTPOINT	CLUSTER	$35,000 - $45,000	7,500 - 14,500	70	NEW ORLEANS	LAKE	Aug-91	18	18	15	38	0.4	0.2	3	8	$150,000
	GREENBRIAR	CLUSTER	$45,000 - $50,000	8,000 - 11,500	70	NEW ORLEANS	GOLF	Sep-93	36	36	4	13	0.3	0.3	32	104	$200,000
	REMAINING EASTOVER	SFD							410						410		
		Subtotal							682	272	160		3.0	3.0	522	176	$360,000
		Average		14,400	92								0.5	0.8			
RIDGECREST		SFD	$25,000 - $35,000	7,480 - 19,000	70	WEST BANK	IN-FILL AREA	Jun-94	60	60	9	4	2.3	2.3	51	23	$140,000

EXHIBIT 10

SUMMARY OF SELECTED ACTIVE RESIDENTIAL COMMUNITIES

NEW ORLEANS METROPOLITAN REGION

MAP KEY	PROJECT NAME		1/ PRODUCT TYPE	LOT PRICE RANGE	LOT SIZE RANGE	AVG. LOT FRONT-AGE	LOCATION	ORIENTATION	DATE PRO-JECT BEGAN	TOTAL HOMES PLAN-NED	TOTAL HOMES OFF-ERED	TOTAL LOTS/ HOMES SOLD	MO. SELL.	AVG. LOTS/ HOMES SOLD/ MONTH	2/ CUR. LOTS/ HOMES SOLD/ MONTH	REMAIN-ING HOME INVENT-ORY	3/ POT-ENTIAL MONTHS INV-ENTORY	AVER-AGE HOME PRICE
BEAU CHENE																		
	BEAU CHENE SFD		SFD	$130,000 - $150,000	20,000 - 43,560	100	MANDEVILLE	LAKE/GOLF	Oct-75	45	45	45	N/A	0.4	N/A	0	OUT	$500,000
	BEAU CHENE SFD		SFD	$80,000 - $85,000	14,000 - 20,000	100	MANDEVILLE	GOLF	Oct-75	513	513	513	228	2.3	N/A	0	OUT	$375,000
	BEAU CHENE SFD		SFD	$65,000 - $83,000	14,000 - 20,000	100	MANDEVILLE	INTERIOR	Oct-75	582	582	556	228	2.4	1.3	26	11	$300,000
		Subtotal								1,140	1,140	1,114		5.1	1.3	26	5	$343,000
		Average			21,900	100								2.3	0.7			
	BEAU CHENE CONDOS		CONDOS	N/A - N/A	N/A - N/A	N/A	MANDEVILLE	CONDOS	Oct-75	355	355	355	N/A	2.4	N/A	0	OUT	$89,000
LAKE TIMBERLANE			CLUSTER	$20,000 - $25,000	6,300 - 8,750	65	WEST BANK	IN-FILL AREA	Apr-91	350	140	130	41	3.2	3.5	220	69	$115,000
GREENLEAVES																		
	GREENLEAVES SFD		SFD	$21,400 - $26,000	9,600 - 10,200	80	MANDEVILLE	INTERIOR	Jan-85	179	179	179	118	2.5	N/A	0	0	$118,500
	GREENLEAVES SFD		SFD	$26,000 - $30,000	10,800 - 13,500	85	MANDEVILLE	INTERIOR	Jan-85	224	224	224	118	2.4	N/A	0	0	$140,000
	GREENLEAVES SFD		SFD	$30,000 - $35,000	13,500 - 16,000	90	MANDEVILLE	INTERIOR	Jan-85	358	358	358	118	3.5	N/A	0	0	$162,000
	GREENLEAVES SFD		SFD	$35,000 - $47,000	17,000 - 20,000	100	MANDEVILLE	INTERIOR	Mar-86	88	88	84	102	0.8	0.5	4	5	$195,000
	GREENLEAVES SFD		SFD	$40,000 - $65,000	24,000 - 28,000	130	MANDEVILLE	LAKE	Jun-87	45	45	45	88	0.7	N/A	0	0	$230,000
		Subtotal								894	894	890		9.9	0.5	4	0	$154,000
		Average			16,300	90								2.6	0.0			
ORMOND COUNTRY CLUB																		
	ORMOND SFD		SFD	$20,000 - $45,000	7,700 - 12,000	75	DESTRAHAN	INTERIOR	Dec-78	1,152	1,152	1,128	188	6.0	3.6	24	4	$135,000
	ORMOND SFD		SFD	$60,000 - $90,000	15,000 - 17,000	100	DESTRAHAN	GOLF	Jun-82	200	200	200	146	1.4	N/A	0	0	$255,000
	PLANTATIONS		SFD	$40,000 - $50,000	43,560 - 43,560	120	DESTRAHAN	ESTATES	Jun-82	148	148	143	146	1.0	0.5	5	5	$230,000
		Subtotal								1,500	1,500	1,471		8.3	4.1	29	3	$161,000
		Average			23,100	83								4.9	2.8			
		GRAND TOTAL								6,150	4,745	4,389		49	32	1,761	36	
		AVERAGE			22,600	93								3.2	1.4			$212,000

1/ SFD-Single-Family Detached Homes

2/ Average monthly sales absorption for the past 6 months.

3/ Estimated length of time to absorb potential inventory of lots/units planned to be offered (current and future phases), based on average sales rate.

SOURCE: Robert Charles Lesser & Co.

EXHIBIT 10

SUMMARY OF SELECTED ACTIVE HIGH-DENSITY SINGLE FAMILY OR CLUSTER PROJECTS

NEW ORLEANS METROPOLITAN REGION

MAP KEY	PROJECT NAME	HOME PRICE RANGE	HOME SIZE RANGE	VALUE RATIO (SQ. FT.)	4/ LOT TO HOME RATIO	5/ BUYER PROFILE: YOUNG SINGLES	YOUNG COUPLES	EMPTY FAMILIES	EMPTY NESTERS	RETIREES	ANN. MAND. HOME-OWNERS FEE	6/ AMENITIES
ENGLISH TURN												
	THE ESTATES PHASE I	$350,000 - $1,350,000	3,275 - 10,500	$107 - $129	28% - 12%	0%	5%	80%	10%	5%	$1,400	G,LK,P,T,CC
	THE ESTATES PHASE I	$225,000 - $550,000	2,400 - 6,500	$94 - $85	44% - 40%	0%	5%	80%	10%	5%	$1,400	G,LK,P,T,CC
	THE ESTATES PHASE II	$250,000 - $1,200,000	3,400 - 9,500	$74 - $126	64% - 16%	0%	5%	80%	10%	5%	$1,400	G,LK,P,T,CC
	THE ESTATES PHASE II	$230,000 - $600,000	2,700 - 6,500	$85 - $92	39% - 20%	0%	5%	80%	10%	5%	$1,400	G,LK,P,T,CC
	THE PLANTATIONS	$250,000 - $626,500	5,000 - 7,000	$50 - $90	50% - 30%	5%	10%	70%	10%	5%	$1,400	G,LK,P,T,CC
	THE VILLAS	$215,000 - $260,000	2,280 - 3,194	$94 - $81	21% - 21%	20%	20%	30%	20%	10%	$1,400	G,LK,P,T,CC
	CORPORATE VILLAS	$400,000 - $400,000	5,000 - 5,000	$80 - $80	48% - 55%	100%	0%	0%	0%	0%	$1,400	G,LK,P,T,CC
	THE LAKES PHASE I	$350,000 - $500,000	5,000 - 7,000	$70 - $71	42% - 38%	0%	5%	80%	10%	5%	$1,400	G,LK,P,T,CC
	THE LAKES PHASE II	$200,000 - $303,000	5,000 - 7,000	$40 - $43	38% - 32%	0%	5%	80%	10%	5%	$1,400	G,LK,P,T,CC
	THE LAKES PHASE III	$215,000 - $315,000	5,000 - 7,000	$43 - $45	33% - 30%	0%	5%	80%	10%	5%	$1,400	G,LK,P,T,CC
	THE MANORS	N/A - N/A	N/A - N/A	N/A - N/A	N/A - N/A	0%	0%	100%	0%	0%	$1,400	G,LK,P,T,CC
	REMAINING PARCELS											
	Subtotal Average					3%	7%	75%	11%	3%		
BARKLEY ESTATES												
	PHASE I	$175,000 - $275,000	2,300 - 3,800	$76 - $72	20% - 20%	5%	20%	50%	20%	5%	$180	TR,PK
	PHASES II-III	$200,000 - $400,000										
	Subtotal Average					#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!		
EASTOVER												
	EASTOVER	$200,000 - $400,000	3,000 - 4,500	$67 - $89	32% - 18%	5%	5%	60%	20%	10%	$780	G,L,P,T,CC,CL
	EASTOVER	$250,000 - $900,000	3,000 - 8,000	$83 - $113	27% - 8%	5%	5%	60%	20%	10%	$780	G,L,P,T,CC,CL
	EASTOVER	$350,000 - $1,200,000	3,500 - 8,000	$100 - $150	19% - 7%	5%	5%	60%	20%	10%	$780	G,L,P,T,CC,CL
	EASTOVER	$350,000 - $2,000,000	3,500 - 15,000	$100 - $133	20% - 4%	5%	5%	60%	20%	10%	$780	G,L,P,T,CC,CL
	EASTOVER	$200,000 - $400,000	3,000 - 4,500	$67 - $89	34% - 18%	5%	5%	60%	20%	10%	$780	G,L,P,T,CC,CL
	EASTOVER	$225,000 - $350,000	3,000 - 4,000	$75 - $88	33% - 21%	5%	5%	60%	20%	10%	$780	G,L,P,T,CC,CL
	PINEHURST COURT	$170,000 - $240,000	2,000 - 2,800	$85 - $86	26% - 19%	10%	5%	5%	65%	15%	$780	G,L,P,T,CC,CL
	EASTPOINT	$115,000 - $225,000	2,000 - 2,800	$58 - $80	30% - 20%	10%	10%	0%	70%	10%	$780	G,L,P,T,CC,CL
	GREENBRIAR	$185,000 - $225,000	2,000 - 2,800	$93 - $80	24% - 22%	50%	25%	0%	0%	25%	$780	G,L,P,T,CC,CL
	REMAINING EASTOVER											
	Subtotal Average					7%	6%	48%	28%	11%		
RIDGECREST		$113,000 - $173,000	2,000 - 2,900	$57 - $60	22% - 20%	20%	10%	70%	0%	0%	NONE	NONE

EXHIBIT 10

SUMMARY OF SELECTED ACTIVE HIGH-DENSITY SINGLE FAMILY OR CLUSTER PROJECTS
NEW ORLEANS METROPOLITAN REGION

MAP KEY	PROJECT NAME	HOME PRICE RANGE	HOME SIZE RANGE	VALUE RATIO (SQ. FT.)	4/ LOT TO HOME RATIO	5/ BUYER PROFILE: YOUNG SINGLES	YOUNG COUPLES	EMPTY FAMILIES	EMPTY NESTERS	RETIREES	ANN. MAND. HOME-OWNERS FEE	6/ AMENITIES
BEAU CHENE												
	BEAU CHENE SFD	$350,000 - $900,000	4,500 - 10,000	$78 - $90	37% - 17%	5%	5%	66%	14%	10%	$960	G,P,T,CC,LK
	BEAU CHENE SFD	$325,000 - $500,000	3,500 - 6,000	$93 - $83	25% - 17%	5%	5%	66%	14%	10%	$960	G,P,T,CC,LK
	BEAU CHENE SFD	$275,000 - $350,000	2,400 - 5,000	$115 - $70	24% - 24%	5%	5%	66%	14%	10%	$960	G,P,T,CC,LK
	Subtotal Average					5%	5%	66%	14%	10%		
	BEAU CHENE CONDOS	$50,000 - $200,000	900 - 2,200	$56 - $91	N/A - N/A	10%	15%	5%	15%	55%	$300	G,P,T,CC,LK
LAKE TIMBERLANE		$109,000 - $136,000	1,585 - 2,228	$69 - $61	18% - 18%	0%	10%	90%	0%	0%	NONE	NONE
GREENLEAVES												
	GREENLEAVES SFD	$107,000 - $130,000	1,600 - 2,000	$67 - $65	20% - 20%	10%	20%	55%	10%	5%	$288	L,TR
	GREENLEAVES SFD	$130,000 - $150,000	2,000 - 2,300	$65 - $65	20% - 20%	10%	15%	65%	10%	0%	$288	L,TR
	GREENLEAVES SFD	$150,000 - $175,000	2,300 - 2,800	$65 - $63	20% - 20%	5%	15%	65%	15%	0%	$288	L,TR
	GREENLEAVES SFD	$175,000 - $225,000	2,800 - 3,200	$63 - $70	20% - 21%	5%	10%	70%	15%	0%	$288	L,TR
	GREENLEAVES SFD	$200,000 - $280,000	3,200 - 3,800	$63 - $74	20% - 23%	0%	5%	75%	15%	5%	$288	L,TR
	Subtotal Average					7%	15%	64%	13%	1%		
ORMOND COUNTRY CLUB												
	ORMOND SFD	$100,000 - $210,000	1,600 - 3,200	$63 - $66	20% - 21%	5%	15%	70%	10%	0%	NONE	G,P,T,CC,PK,NP
	ORMOND SFD	$200,000 - $700,000	3,200 - 5,500	$63 - $127	30% - 13%	10%	20%	50%	15%	5%	NONE	G,P,T,CC,PK,NP
	PLANTATIONS	$178,500 - $500,000	2,800 - 4,500	$64 - $111	22% - 10%	5%	10%	65%	15%	5%	NONE	G,P,T,CC,PK,NP
	Subtotal Average					6%	15%	67%	11%	1%		
						#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!		

4/ Defined as the price of the lot divided by the price of the home.
5/ Families includes small and larger families with young and older children.
6/ L=Lake, G=Golf, P=Pool, T=Tennis, CL=Clubhouse, TR=Walking or Jogging Trails, CC=Country Club, PK=Park, NP=Nature Preserve

SOURCE: Robert Charles Lesser & Co.

EXHIBIT 11
SUGGESTED PRODUCT PROGRAM AND TARGET MARKET
SCENARIOS FOR THE SUBJECT PROPERTY

SCENARIO: SINGLE-FAMILY PRODUCT PRICED FROM $140,000 TO $270,000

Theme:	Upgrade Production, Semi-Custom, and True Custom Housing. The key to realizing strong sales will be to create four separate neighborhoods within the community, two of which can be sold to one or more merchant builders. The two higher-priced neighborhoods should feature a lot sales program oriented to selected custom home builders.
Buyer Profile:	Families with children are the most likely buyers. Young couples, empty nesters and some single adults also could be targeted. First-time and upgrade buyers, including transferees new to New Orleans, are more likely to purchase in the West Bank area.
Buyer Motivations/ Sensitivities:	Buyers are looking for "good value" in terms of quality, home size and lot size for the price. They are motivated by quality community; innovative home design; amenities; quality schools; easy access to employment.
	The golf course, though public, provides a focus for the development and contributes to a community identity while providing a visual amenity.
Marketing:	Community should be marketed first before the homes. Consumers first buy the community/neighborhood, i.e. the location before deciding upon which house to purchase. Centralized marketing from an information center where prospective buyers are told the "Community Story", i.e. the concept, the lifestyle that is being marketed, will enhance absorption of lots and homes.

Product Types:	Approx. Lot Sizes:	Lot Frontages:	Lot to Home Ratio:	Lot Prices:	Home Prices:	Home Sizes:	Value Ratio:	Annual Absorption:
Upgrade Production	9,500-10,890	70-75	18%	$25,000 - $29,000	$140,000 - $160,000	2,200 - 2,800	$64 - $57	32
Move-up Semi-Custom	12,000-13,500	75-80	20%	$33,350 - $37,950	$160,000 - $200,000	2,500 - 3,300	$64 - $61	24
Exec. Custom Home	14,000-16,000	80-85	22%	$47,250 - $54,000	$200,000 - $240,000	3,000 - 3,700	$67 - $65	14
Luxury Custom Home	19,000-21,000	85-100	25%	$66,000 - $75,000	$240,000 - $270,000	3,500 - 4,400	$69 - $61	6
							Total:	76

SOURCE: Robert Charles Lesser & Co.

Exhibit 12
Estelle Plantation Recommendations and Phasing Analysis

	Product	Amenity Orientation	Average Lot Size	Base Lot Price Range			Lot Premiums		Base Lot $ to Home $ Ratio	Average Home Price	% Lot Premiums	Est. Unit Absorp.	Net Du/Ac	Ann. Acres Absorp.
1	Upgrade Production	Interior Homesite	10,000	$25,000	-	$29,000	$0	- $0	18%	$150,000	0%	32	3.0	10.7
2	Move-up Semi-Cust.	Golf View Homesite	12,500	$29,000	-	$33,000	$4,350	- $4,950	20%	$180,000	15%	24	2.4	10.0
3	Exec Custom Home	Fairway Frontage	15,000	$35,000	-	$40,000	$12,250	- $14,000	22%	$230,000	35%	14	2.0	7.0
4	Lux. Custom Home	Green/Fairway/Larger Lot	20,000	$44,000	-	$50,000	$22,000	- $25,000	25%	$280,000	50%	6	1.5	4.0
												76		31.67

Acres Per Year Max:	31.7
Total Acres:	367.00
Minimum Years to Sell Out	12

PHASING, ACRES PER YEAR

	Product	Ann. Acres Absorp.	Total Acres Alloc.	% Acres Alloc.	Years=====> 1	2	3	4	5	6	7	8	9	10	11	12
1	Upgrade Production	10.7	124.8	34%	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	7.4
2	Move-up Semi-Cust.	10.0	113.8	31%	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	3.8
3	Exec Custom Home	7.0	80.7	22%	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	3.7
4	Lux. Custom Home	4.0	47.7	13%	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.7
		31.7	367.0	100%	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	18.7

It is important to note that this phasing analysis assumes four separate neighborhoods, as described above, selling homes and lots simultaneously. Furthermore, it assumes that the land plan results in lots that fit the lot orientation descriptions provided above, i.e., that the proportion of golf view, fairway frontage etc. lots can be achieved by the site plan. To the degree that the final site plan deviates from the plan described above, the annual acreage absorptions shown may not be achieved.

SOURCE: Robert Charles Lesser & Co.

ROBERT CHARLES LESSER & CO.
REAL ESTATE ADVISORS

DATE: December 7, 1992 02-4680.00

TO: Mr. Thomas Carrere
Managing General Partner
ESTELLE PLANTATION PARTNERSHIP
111 Veterans Boulevard
Suite 1150
Metairie, Louisiana 70005

FROM: **ROBERT CHARLES LESSER & CO.**
1575 Northside Drive
Building 200, Suite 240
Atlanta, Georgia 30318

SUBJECT: Market Analysis and Development Strategy for 367 Acres Adjacent to New Public Golf Course; Metairie, Louisiana

MEMORANDUM

I. INTRODUCTION

Robert Charles Lesser & Co. was retained to provide an analysis of the need and development strategy for a 500 acre property in Jefferson Parish, Louisiana, as a site for new residential development. The subject site will incorporate a proposed new 18-hole municipal golf course, to be designed by a top name architect, such as Tom Fazio or Ben Crenshaw, on acreage you donated to Jefferson Parish. To facilitate your final decisions with regard to this development, the market study will be used to determine the following: the opportunities for the non-golf acreage; the optimum mix of residential housing products there; projections of annual sales absorption in a lot sales program; and recommendations in the areas of pricing strategy, market orientation, target market, lot sizes, prices and premiums, and the marketing impact, if any, of the golf course.

In order to accomplish those objectives, we employed a qualitative and quantitative review of development opportunities utilizing both primary and secondary research methodologies as follows:

1. Physical inspection and evaluation of the subject property with regard to topography, geographic orientation, lay-out of the planned golf course and subsequent views, surrounding land uses, access and environmental issues.

2. General review of economic trends and demographic characteristics of the greater New Orleans market area relative to the need for residential lots and homes. Compilation and analysis of available demographic and socioeconomic data with respect to historical and projected population and employment growth. Review of relevant market research materials previously compiled by our organization for the greater New Orleans market specifically related to residential housing and golf courses.

3. Analysis of for-sale residential developments in the greater New Orleans market in general, but with particular emphasis on the defined Competitive Market Area (CMA) of the subject site. Evaluation of selected existing competitive residential and golf-oriented developments in terms of location, total lots and units planned, inventory profile, absorption trends, pricing structure and premiums, lot sizes, amenities and buyer profiles. This information is supplemented by interviews with real estate professionals and public officials in the area with regard to current market conditions and planned and proposed residential developments.

4. Estimation of future need for new housing at the subject property within a proscribed range of lot and home price variables.

5. Translation of research and findings into recommendations for a development program and pricing strategy.

The following assumptions were critical in the conduct of the analysis:

1. No major national recessions will occur during the absorption period.

2. Our recommendations are based on field research and present knowledge of the greater New Orleans area as of September 1992 through December 1992. Our research included existing competition and future competition announced to public officials as of this date.

3. The recommended development program assumes constraints of the topography of the land and costs issues as provided to us during the course of the assignment.

II. SUBJECT PROPERTY

A. Site Location

The subject property is located in Jefferson Parish, Louisiana on the West Bank of the Mississippi River. The approximately 500 acre property, referred to as Estelle Plantation, is bisected by Lafitte Laroose Highway, a four lane artery that runs north to south through the property from Barataria Boulevard. At the writing of this report, the property owners were discussing with the Jefferson Parish Council the possibility of the placement of Jefferson Parish's first and only public, daily fee golf course on the property. The proposed golf course parcel consists of 175 acres of the 500 acre portion of the property lying east of Lafitte Larose Highway. This land would be donated to the Parish for the development of the proposed golf course. To this end, Jefferson Parish have already engaged golf consultants Golf Resources Inc. to provide a feasibility study of the site as a course facility. The owners also have spoken with several course designers including, but not limited to, Tom Fazio and Ben Crenshaw.

Estelle Plantation is located in the south central portion of the West Bank of Jefferson Parish, a middle income "bedroom" community located within the New Orleans Metropolitan Area. Land within the West Bank of Jefferson Parish is dominated by single family and rental housing, service oriented retail strip centers and regional malls, one to

four story low-rise office buildings, and light to heavy industrial uses located along the inland canals connecting the Mississippi River and the inland lakes system.

B. Accessibility and Visibility

Estelle Plantation has primary access to the New Orleans Central Business District and other major employment centers on the East Bank via the West Bank Elevated Expressway, Business 90, the new Mississippi River Toll Bridge and the Huey P. Long Bridge. Opening of the new bridge across the Mississippi River has improved regional access to downtown by doubling the capacity of traffic flowing directly into the Central Business District. Access is further enhanced by the expansion of several main artery roads in the area, including Barataria Boulevard and Lafitte Larose Highway, from four to six lane boulevards. Effective commuting time from the subject site to employment centers in the New Orleans Central Business District and downtown Metairie can now be less than thirty minutes under normal driving conditions.

C. Surrounding Land Uses

The Estelle Plantation is surrounded by a wide variety of land uses. North of the site on Lafitte Larose Highway is a concentration of higher density, lower middle income housing. These homes, which border the subject property on its northern and western sides, consist mainly of single story, brick ranch houses in the $50,000 to $75,000 price range. The northern, eastern and southern boundaries of the site are surrounded by vacant parcels of privately owned developable land and undevelopable parcels maintained by the National Forest and Wildlife Preserve.

Commercial and retail land uses anchored by Belle Promenade Mall, a regional shopping center, are found due northeast of the subject property at the intersection of Barataria Boulevard and Lapalco Boulevard. Executive housing in the immediate area is represented by one walled community, Plantation Estates, located opposite Belle Promenade Mall, and one golf-oriented community, Stonebridge, located east of the property near the intersection of Lapalco and Manhattan Boulevards.

III. DEMOGRAPHIC AND SOCIOECONOMIC ANALYSIS

The following section reviews current economic conditions for the market area, forecasted growth, demographic and income characteristics of the local and regional market. This data provides a regional framework for assessing future demand for residential single family lots and homes at the proposed site. The potential depth of market for the development of residential lots and homes at Estelle Plantation will be influenced by population and economic growth trends within the West Bank Competitive Market Area (CMA), Jefferson Parish, and the greater New Orleans Metropolitan Statistical Area (MSA).

The area from which most of the demand for new housing at the subject property will emanate is the New Orleans MSA, which includes Jefferson, Orleans, St. Charles, St. John the Baptist, St. Bernard, and St. Tammany Parishes. The competitive market area (CMA) is the geographic area wherein projects compete directly for available demand on a more of less equal basis. The competitive market area for the subject property has been defined as the entire portion of Jefferson Parish lying on the western bank of the Mississippi River (See EXHIBIT 1-C for location).

Population and employment estimates for these areas are shown on EXHIBITS 2 through 6 of the Appendix and are summarized below.

A. Regional Economic Overview

The highly sensitive New Orleans economy is dominated by the energy and tourism industries, and as a result is affected severely during periods of low energy prices. As this report is written, New Orleans is slowly recovering from the national recession while still struggling to fully recover from the regional economic and real estate depression that occurred during 1985 to 1987. The plunge in oil prices to very low levels that occurred in the mid-1980's caused mass lay-offs and extensive consolidation among oil industry companies.

The New Orleans economy grew by 3,100 new jobs during the past year, down by more than 50% from 1990. However, that downturn pales when compared to the annual loss of 13,000 to 16,000 jobs that occurred in the area during the oil recession of 1985 to 1987, and similar job losses during the last national recession in 1982. In comparison to other major metropolitan areas, our research shows that New Orleans metropolitan area fared well by having some positive job growth. In the last two years many metro areas have suffered from no growth or severe net job losses (1990 and 1991). Job growth and stabilization in the New Orleans area was enhanced somewhat by the slight increase in oil prices worldwide during and following the Persian Gulf War. Further consolidation and lagging demand within the oil industry could negatively affect job growth within the metropolitan area over the next decade.

New Orleans is only now beginning to attract a more diversified industrial base including health-related services, aerospace, research and technology-related industries. These are expected to bring higher paying, more professional jobs to the area. As the economy diversifies and job growth increases, it is anticipated that the demand for new housing within the region will increase. The Louisiana State Gaming Commission has recently approved the development of at least one major Casino facility in the New Orleans area, to be located in Orleans Parish. The projected cost of the facility has been down-scaled from over $1 billion to approximately $425 million. It has not been determined how the introduction of gaming facilities and casinos within the New Orleans area will affect population and housing growth. It is expected to have a positive influence on employment by creating numerous tourist and service related jobs. However, these jobs are typically low paying and historically have not increased the demand for single family housing.

Employment growth projections (EXHIBIT 5) indicate that the New Orleans MSA is expected to average approximately 5,470 new jobs per year from 1992 to 1996, up from the growth of 3,100 jobs in 1991. Approximately 35% of the existing jobs are located in Jefferson Parish, which expects to derive a substantial amount of the new job growth from immigration to the New Orleans area as well as the suburban migration by some Orleans Parish and central business district companies.

During the 1990's, the subject property will compete with executive housing projects and golf course communities in the employment areas outside the West Bank of Jefferson Parish and specifically with a growing number of communities in St. Tammany Parish, on the other side of Lake Pontchartrain from Jefferson Parish.

B. Demographic Analysis and Demand Sources

Based on the 1990 census, the New Orleans MSA has a current 1992 population of 1,239,416 persons in 457,349 households. Approximately 37% of the MSA's population lives in Jefferson Parish, representing 462,968 people within 167,738 households (See EXHIBIT 2). Forecasts indicate that for the first time since the early 1980's, the MSA will begin to experience net immigration of population, possibly during the mid to late 1990's. According to projections made by the Business and Economic Research Division of the University of New Orleans and the New Orleans River Region Chamber, household growth is expected to rebound to an average of 7,732 new households per year in the MSA from 1992 to 1996 for an annual growth rate of 1.6%.

The West Bank CMA, where the subject site is located, represents about 14% of the households in the MSA, and 15% of the projected annual household growth. The CMA is projected to grow by an annual average of 241 persons and 674 households from 1992 to 1996, including some movement from the more urban areas of Orleans Parish to the more suburban CMA with the majority of the household growth generated internally within the West Bank CMA.

The 25 to 34 age category will remain the single largest age group in the CMA through 1996, declining gradually from 17.5% of the population in 1991 to 17.4% of the population in 1996 (See EXHIBIT 3). Following national trends, much stronger growth will occur in the age group between 35 and 44. This age cohort will grow from 15.6% to 17.7% of the CMA's population, expanding by an annual average of 791 persons through 1996. These age groups, particularly when found in married couple or family households, have the highest home-ownership rates of any age group.

The percentage of married couples with children who buy new homes has remained stable in the United States since 1980. National trends, wherein married couples with children make up 60% of all move-up buyers and about 54% of all new-home buyers, are reflected in the market profiles of New Orleans home buyers. This trend toward strong growth in persons aged 35 to 54 is positive for the development of new "move-up" and luxury single-family homes at the subject property.

Residential permit activity for both single-family and multifamily construction has declined each year since it peaked in 1983 (See EXHIBIT 7). Current figures indicate that in 1992 the area will experience a 50% increase in permit volume in the MSA and a 270% increase in volume in Jefferson Parish. As of the end of July 1992 Jefferson Parish was issuing permits at an annual rate of 1,956, an increase of 1,426 over the 1991 total of 530 permits issued. Affecting the dramatic increase in permit activity are lowered interest rates for new construction and permanent mortgages, the beginnings of a return of speculative building and the anticipated end of the recession.

Summary

The outlook for residential construction activity is brighter than it has been during the mid-1980's to early 1990's. This is based on the assumptions that (1) mortgage rates continue to stay below 10% and especially if they remain at current levels (below 8%), and (2) inventory levels continue to be depleted, (3) the job market strengthens, and (4) consumer confidence returns, then increasing housing sales price appreciation and construction activity can be expected. In summary, the long-term outlook for the New Orleans economy and specifically Jefferson Parish is positive once the market fully recovers from the national recession. Job growth, however, will remain moderate as the employment base converts away from petroleum-based industries. Increases in employment and population are expected to contribute to gains in personal income in the 1990's, which could have a favorable impact on demand for "move-up" housing.

IV. COMPETITIVE MARKET AREA

In order to determine the potential for the development of single family lots and homes at the proposed site, competitive projects within the market were surveyed. Among the projects selected were competitive planned unit developments with golf courses and single family subdivisions having competitive price and product types. A total of 12 actively selling and re-sale communities were identified with a total of 7,520 units planned, 6,606 (88%) of which have been offered for sale to date. Of the homes offered, 6,057 (92%) have been sold. Home pricing and sales data for each of the surveyed projects is shown on EXHIBITS 9-A and 9-B, with lot characteristics of each project summarized on EXHIBIT 9-A . The map on EXHIBIT 8 plots the location of each project in relation to the subject site.

Many of the projects surveyed have already sold out of developer offered lots and units and are currently selling resale lots owned by individuals, builders or investors. Home prices among the projects range from $49,000 (a 900 s.f. condominium) to over $1 million for a 10,000 s.f. mansion. The majority of the homes surveyed are priced in the $150,000 to $300,000 price category. Lot prices at the communities range from $21,000 to $305,000 for lots from 9,600 square feet to over an acre in size. Average lot sizes are just under a third of an acre, with the majority of the lots priced between $35,000 and $60,000. While the majority of the lots are sold to builders who resell to individuals for custom homes, some of the properties sell directly to individuals for investment or use. Stonebridge offers below market financing to individuals at the prime rate less 1.5%, which has increased recent lot absorption. Several of the projects located in Metairie near the Metairie and New Orleans Country Clubs have in-fill lots for sale by individual owners. These locations are also prime for "teardown" lot development opportunities.

Projects surveyed are sorted by average home price in EXHIBITS 9-A and 9-B. As the table shows, homes sales absorption ranges from approximately 1.6 to 9.1 units per project per month depending upon the price range. The strongest sales have historically taken place within the communities that offer homes priced below $250,000. The rate of absorption in projects with product over $250,000 is notably slower than among the more

competitively priced projects. Actual build-out of homes on premium lots (with completion clauses in the sales contracts) in some of these communities is slowed by individuals and builders who wait until close to the deadline for beginning construction. As the available lots and homes in the more preferred areas in St. Tammany and the East Bank begin to sell out, demand should increase as the West Bank emerges as an increasingly attractive alternative for lots with amenity orientations (e.g. near or facing a golf course). However, the current slow pace of sales of the more expensive product on the West Bank should continue until competition from projects in more preferred areas decreases further and the economy begins to pull out of the recession, creating greater internal demand for the projects from move up home buyers currently living on the West Bank.

The two most competitive golf communities include:

1. Stonebridge: A moderately priced private golf and 1,008-lot community currently being developed by Marrero Land, located in the West Bank area. A bank owned the project in 1989 and 1990 and sold off 50 to 60 of the lots per year at discounted prices of $20,000 to $60,000. A total of 21 lots were sold in 1991 at prices of $30,000 to $70,000. Marrero Land Company purchased the remaining developed lots from the bank and is currently selling them to builders and individuals without direct discounting to the public. Builders receive a 10% discount but must build within 18 months and individuals are offered special financing terms and must build within 5 years.

2. Eastover: A security gated and public golf and residential community with a total of 650 lots priced from $35,000 to $60,000 for interior lots and $65,000 to $75,000 for golf lots. Since the project began in September 1987, a total of 134 lots have been sold to builders and consumers at an average rate of 30 lots per year. The concept of a gated community with a public golf facility has received mixed reviews, therefore we recommended lots prices lower than Eastover's. Currently they are selling lots to builders at discounted prices but refused to disclose the average discount offered (the market rate is typically a 10% discount to builders with a completion clause for the commencement of building homes on the lots).

While these communities represent golf-oriented consumer alternatives in the market, only Eastover has a similar calibre of golf course as that proposed for the subject site. Stonebridge and Eastover were able to command a 20-30% premium on their golf oriented lots. Before the builder discount the home to lot ratios (i.e. amount the lot accounts for of the finished "house-lot" package) were approximately 20% on the non-amenity lots and 25% on the golf oriented lots. This ratio fell to 18% and 23%, respectively once the discounts to the builders were considered a factor.

V. POTENTIAL DEPTH OF THE MARKET AND THE NEED FOR NEW HOUSING

A statistical demand analysis, summarized in EXHIBIT 10, was conducted to evaluate the potential depth of the market and need for single-family detached homes at the subject site. This analysis is a critical component of determining a well-balanced, market-driven development program. Lot and home prices used in this analysis were determined by and reflect both demographic conditions within the CMA and that area's historical trends in for sale housing. The mix of lot prices range from $28,000 to a maximum of $77,000. Home prices calculated on the basis of a lot to home ratio in the 20% to 22% range, are $140,000 to $320,000. The statistical analysis is consistent with historical market performance of competitive properties and future growth forecasts and trends for the MSA and the CMA.

The need for new single-family homes is generated from three primary sources:

1) New households - households migrating to the New Orleans MSA or new household formations;

2) Owner preference - households within the MSA who presently own their own home but decide to buy a new residence due to their family growing with the addition of children or other lifestyle changes (i.e. upgrade, move-up, move-over or move-down buyers);

3) Renter upgrading - households within the MSA presently renting who prefer to purchase a home.

Factors creating need within the market include income, home ownership propensity and turnover (i.e. propensity to move in a given year) for the home price ranges of $140,000 to $340,000, corresponding with lot prices of between $28,000 and $79,000. These price and income ranges were selected because they represent home and lot prices at potentially competitive projects located within the New Orleans MSA.

In order to estimate each income group's propensity to purchase a new home as opposed to a resale home or other product type, an "active market factor" was applied to the qualified groups of potential buyers. This factor, applied to income and home owner qualified households, is based on an analysis of product availability by price range and percentage of new versus resale home sales by price range in the MSA.

Total annual need derived from the West Bank CMA is anticipated to be 296 households annually over the next four to five years. Sixty per cent of the CMA's total need, or 178 households each year, will be derived from existing homeowners in turnover. Renter households purchasing their first home will account for another 25%, or 73 households annually. New households moving into the MSA will account for the smallest share of new housing needs, about 15% or 45 households each year; their share could increase given improvements in the overall economy and resale market specifically.

Based on an assessment of the market and competitive alternatives, the subject site is capable of an estimated capture rate of 20% of the West Bank CMA's need for new housing (for lots priced under $80,000 and above $25,000). This capture rate equates to a potential for 60 lots per year. This analysis is a baseline absorption of potential by price range. Actual absorption will be affected by such factors as overall economic conditions, the resale market, home mortgage interest rates, existing inventory and competitiveness in the CMA at the time sales activity is engaged and the effectiveness of the marketing strategy employed.

BASELINE ANNUAL ABSORPTION POTENTIAL:
SINGLE-FAMILY LOTS AND HOMES AT SUBJECT SITE
1992 - 1996

Lot Price	Price Range	Home Absorption	Baseline Monthly Absorption	Mix
$28,000-$39,000	$140,000-$170,000	25	2.1	37.0%
$34,000-$40,000	$170,000-$210,000	17	1.4	25.0%
$42,000-$58,000	$210,000-$250,000	14	1.2	22.0%
$50,000-$70,000	$250,000-$290,000	10	0.8	16.0%
	TOTAL	66	5.5	100%

VI. CONCLUSIONS AND RECOMMENDATIONS

A summary of recommendations for the single family product program at the subject site are outlined in EXHIBIT 11. Based on our understanding of the West Bank CMA, the findings of our survey of existing residential properties and the analysis of demographic and socioeconomic trends, we believe the site can support a lot sales program making lots available in the range of $28,000 to $70,000. These price points are competitive with the bulk of the available inventory in the CMA and in the range of affordability of the most likely buyer segments in this market area.

We further recommend a three-component pricing program:

PRODUCT PROGRAM RECOMMENDATIONS AT SUBJECT SITE, JEFFERSON PARISH, LOUISIANA

Orientation	Lot Size	Price Range	%of Mix
Primarily Golf	20,000 s.f.	$50,000-$70,000	16%
Primarily Golf	16,000 s.f.	$52,000-$58,000	22%
Golf/Non-Golf	13,000 s.f.	$34,000-$48,000	25%
Clubhouse/Golf	10,000 s.f.	$28,000-$39,000	37%

Our surveys of competitive residential for-sale projects with amenity orientations indicate that projects with the faster sales paces of 7.4 to 9.1 lots and homes per month include those which offer a broad price range of product and/or lower priced product in general. New home sales among projects surveyed are strongest below $200,000 (lots priced under $50,000). Therefore, our recommendations of lots priced from $28,000 to $70,000 dollars and ranging in size from 10,000 to 20,000 square feet are consistent with prices at the best selling, most competitive projects within the marketplace. We based specific recommendations for the sizes, pricing, orientation and frontage of the recommended lots, at the subject site, upon the more popular selling lots at projects we considered to be the most competitive. We recommend 23% of the developable property be devoted to 20,000 s.f. lots. In order to command the recommended prices of lots in this category, a maximum number of the 20,000 s.f. lots should have a golf orientation with a minimum frontage of 80 feet. The 13,000 and 16,000 s.f. lots should be divided into those with golf orientations and the remainder having close proximity to the lots with golf frontage (i.e. golf-view lots across the street from the golf course). The smallest lots recommended are in 10,000 s.f. range. The majority of these lots should be located near the clubhouse and the swim/tennis facility, as a higher density, high activity area. Our research indicates the majority of these lots would probably be purchased by first time "move-up" buyers with children. All three types of lots should have their own neighborhood, with both amenity and non-amenity orientations. The best locations should be reserved for the larger lots.

The demographic analysis revealed that only about 16% of households in the New Orleans MSA can afford a new home priced in excess of $200,000. Less than 10% can purchase a home priced at $300,000 or above. But, as shown in EXHIBIT 4, 46% of potential owner movers could afford a new home priced between $90,000 and $209,000. Based on location, supply and demand, and the golf orientation we recommend single family product priced between $130,000 and $290,000. The lower prices will draw consumers who would like to live in a prestigious community but are currently priced out of the market. The lower priced product is also likely to attract a younger market audience profile that seems to be more accepting of the idea of living on the West Bank.

The presence of a golf course, albeit municipal, does offer some opportunity for premiums based on views. We have identified premiums for golf and clubhouse views as well as a non-golf or interior lot alternative. However, because the municipal golf course may cause some concern with regard to traffic, accessibility or security at the subdivision, certain precautions should be taken. Separate access roads leading to the subdivision and the golf course should be included in the overall design. A slight open space buffer should be included at the back of any lots that back-up to the golf course. Lots may still be sold on the basis of golf views, but without the feeling among potential purchasers that their home is too accessible or vulnerable.

Consumers in the New Orleans area, as in other parts of the country, have very definite ideas regarding the "better areas to buy a home". Local wisdom, as expressed by Realtors and other local real estate professionals, states that more prestigious addresses are the established neighborhoods of New Orleans, e.g., the East Bank neighborhood such as the Garden District, University, Old Metairie, French Quarter and State Street areas. Some resistance to the West Bank location for up-scale housing should be factored into all decisions in marketing as well as anticipated levels of absorption at the subject property. While these facts may be considered a "negative" for subdivisions attempting to sell at the very high-end of the market, it presents a "positive" opportunity to cater to the mid-price ranges of the move-up market, which seems to hold the greatest potential for new home sales in the area, and which your project is well suited to address.

APPENDIX

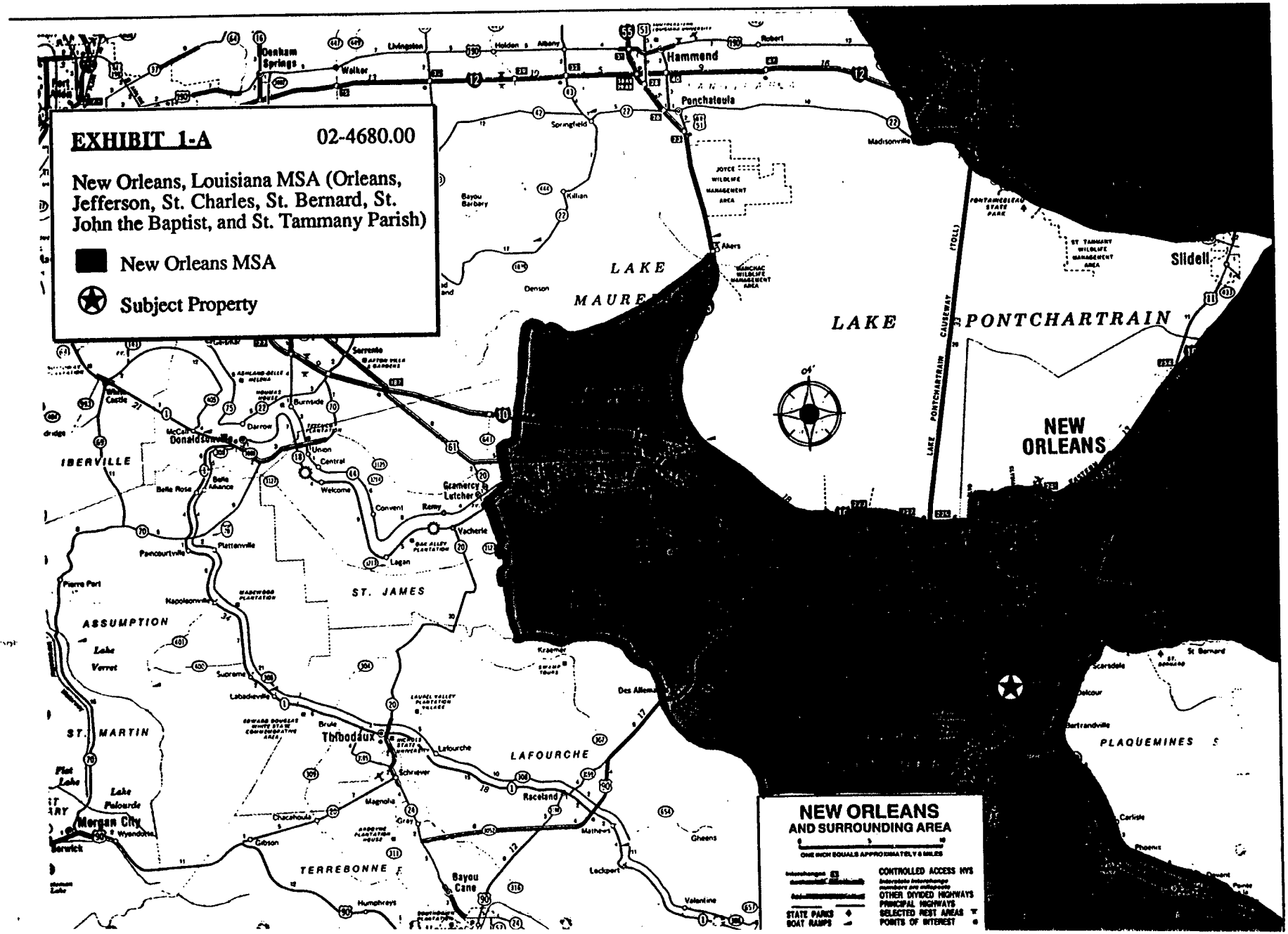


EXHIBIT 1-A
02-4680.00
New Orleans, Louisiana MSA (Orleans, Jefferson, St. Charles, St. Bernard, St. John the Baptist, and St. Tammany Parish)
New Orleans MSA
Subject Property
LAKE PONTCHARTRAIN
LAKE MAUREPAS
NEW ORLEANS
Hammond
Ponchatoula
Slidell
Donaldsonville
Thibodaux
Raceland
Morgan City
Bayou Cane
IBERVILLE
ASSUMPTION
ST. JAMES
ST. MARTIN
LAFOURCHE
TERREBONNE
PLAQUEMINES
NEW ORLEANS
AND SURROUNDING AREA
CONTROLLED ACCESS HVS
OTHER DIVIDED HIGHWAYS
PRINCIPAL HIGHWAYS
SELECTED REST AREAS
POINTS OF INTEREST
STATE PARKS
BOAT RAMPS

EXHIBIT 1-B 06-4680.00

Outline of Parishes that make up the New Orleans MSA in Relationship to the South-east Louisiana Area

New Orleans MSA

Subject Property

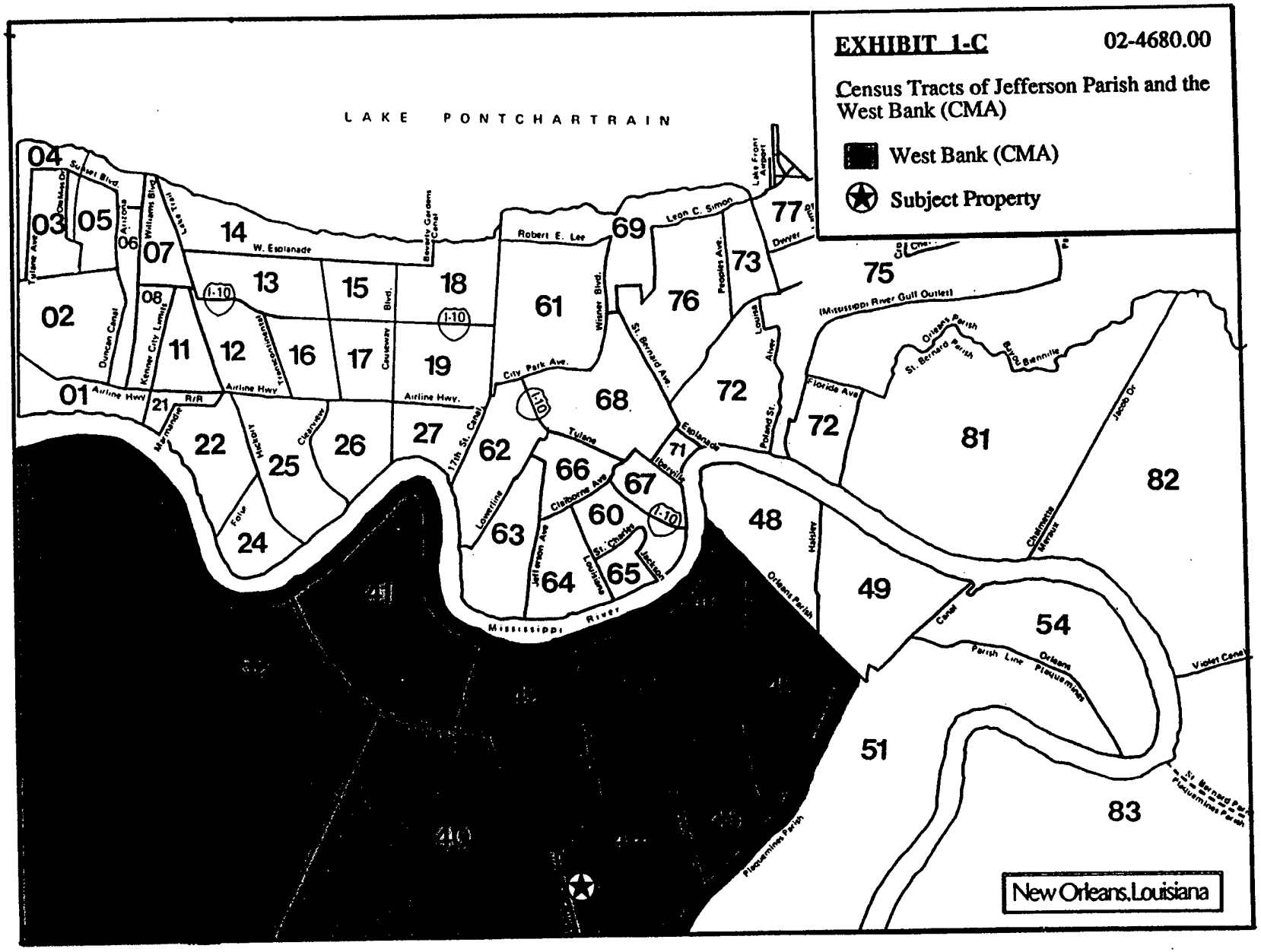


EXHIBIT 1-C
02-4680.00
Census Tracts of Jefferson Parish and the West Bank (CMA)
West Bank (CMA)
Subject Property
LAKE PONTCHARTRAIN
Mississippi River
Orleans Parish
Plaquemines Parish
New Orleans, Louisiana

EXHIBIT 2
POPULATION AND HOUSEHOLD GROWTH TRENDS, 1980-1996
THE NEW ORLEANS MSA, THE JEFFERSON PARISH
AND THE WEST BANK CMA

	CENSUS 1980	EST. 1985	CENSUS 1990	EST. 1991	EST. 1992	PROJ. 1996	--Annual Number Change-- 1980-85	1985-90	1990-91	1991-92	1992-96	Compound Annual Growth (%) 1980-85	1985-90	1990-91	1991-92	1992-96
NEW ORLEANS MSA /1																
Population	1,256,256	1,329,800	1,238,816	1,232,372	1,239,416	1,287,549	14,709	(18,197)	(6,444)	7,044	12,033	1.1%	-1.4%	-0.5%	0.6%	1.0%
Households	445,627	487,106	455,178	453,078	457,349	488,276	8,296	(6,386)	(2,100)	4,271	7,732	1.8%	-1.3%	-0.5%	0.9%	1.6%
Household size	2.82	2.73	2.72	2.72	2.71	2.64						-0.6%	-0.1%	-0.1%	-0.4%	-0.7%
JEFFERSON PARISH																
Population	454,592	474,793	459,000	460,976	462,958	470,972	4,040	(3,159)	1,976	1,982	2,003	0.9%	-0.7%	0.4%	0.4%	0.4%
Households	155,685	167,181	166,045	166,760	167,738	173,790	2,299	(227)	715	978	1,513	1.4%	-0.1%	0.4%	0.6%	0.9%
Household size	2.92	2.84	2.76	2.76	2.76	2.71						-0.6%	-0.5%	0.0%	-0.2%	-0.5%
JEFFERSON PARISH AS A % OF NEW ORLEANS MSA																
Population	36.2%	35.7%	37.1%	37.4%	37.4%	36.6%	27.5%	17.4%	-30.7%	28.1%	16.6%					
Households	34.9%	34.3%	36.5%	36.8%	36.7%	35.6%	27.7%	3.6%	-34.0%	22.9%	19.6%					
WEST BANK CMA /2																
Population	170,701	170,791	170,880	171,213	171,547	172,513	18	18	333	334	241	0.0%	0.0%	0.2%	0.2%	0.1%
Households	53,952	55,536	57,213	57,861	58,516	61,213	317	335	648	655	674	0.6%	0.6%	1.1%	1.1%	1.1%
Household size	3.16	3.08	2.99	2.96	2.93	2.82						-0.6%	-0.6%	-0.9%	-0.9%	-1.0%
WEST BANK CMA AS A % OF NEW ORLEANS MSA																
Population	13.6%	11.3%	13.8%	13.9%	13.9%	13.4%	0.1%	-0.1%	-5.2%	4.7%	2.0%					
Households	12.1%	11.4%	12.6%	12.8%	12.8%	12.5%	3.8%	-5.3%	-30.9%	15.3%	8.7%					

Notes: 1/ NEW ORLEANS MSA INCLUDES JEFFERSON, ORLEANS, ST. CHARLES, ST. JOHN THE BAPTIST, ST. BERNARD AND ST. TAMMANY PARISHES.
NOTE THAT PRIOR TO 1984, THE NEW ORLEANS MSA DID NOT INCLUDE ST CHARLES AND ST. JOHN THE BAPTIST PARISHES.

2/ THE WEST BANK CMA IS DEFINED AS THE ENTIRE AREA LYING WEST OF THE MISSISSIPPI RIVER IN JEFFERSON PARISH.

Sources: ROBERT CHARLES LESSER & CO.
UNIVERSITY OF NEW ORLEANS, DIVISION OF BUSINESS & ECONOMIC RESEARCH
THE NEW ORLEANS AND RIVER REGION CHAMBER
U.S. CENSUS BUREAU, URBAN DECISION SYSTEMS

EXHIBIT 2.1
POPULATION AND HOUSEHOLD BY YEAR FOR NEW ORLEANS MSA 1980-1996

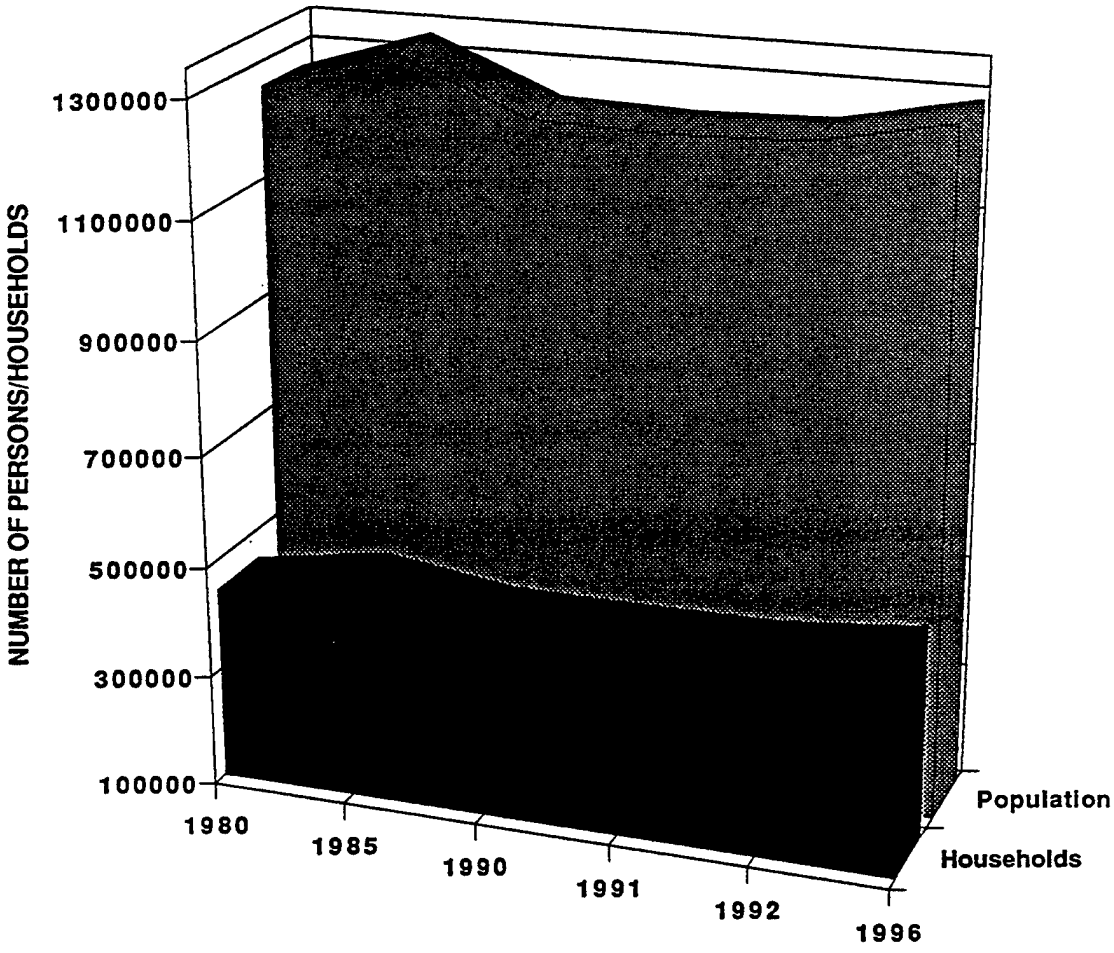


EXHIBIT 2.2
POPULATION AND HOUSEHOLD GROWTH TRENDS
NEW ORLEANS MSA
1980-1996

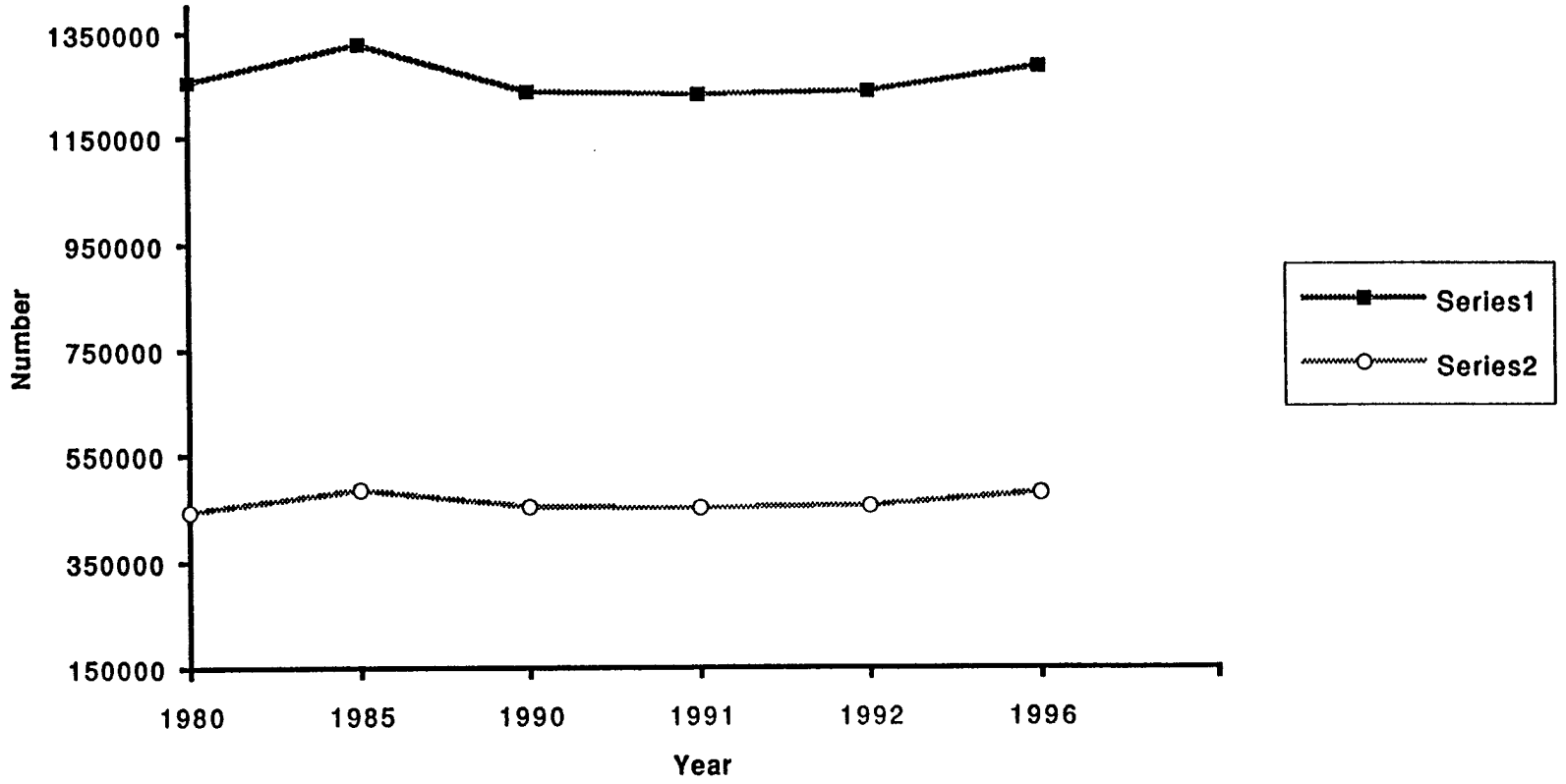


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EXHIBIT 2.3
POPULATION GROWTH TRENDS
NEW ORLEANS MSA
1980-1996

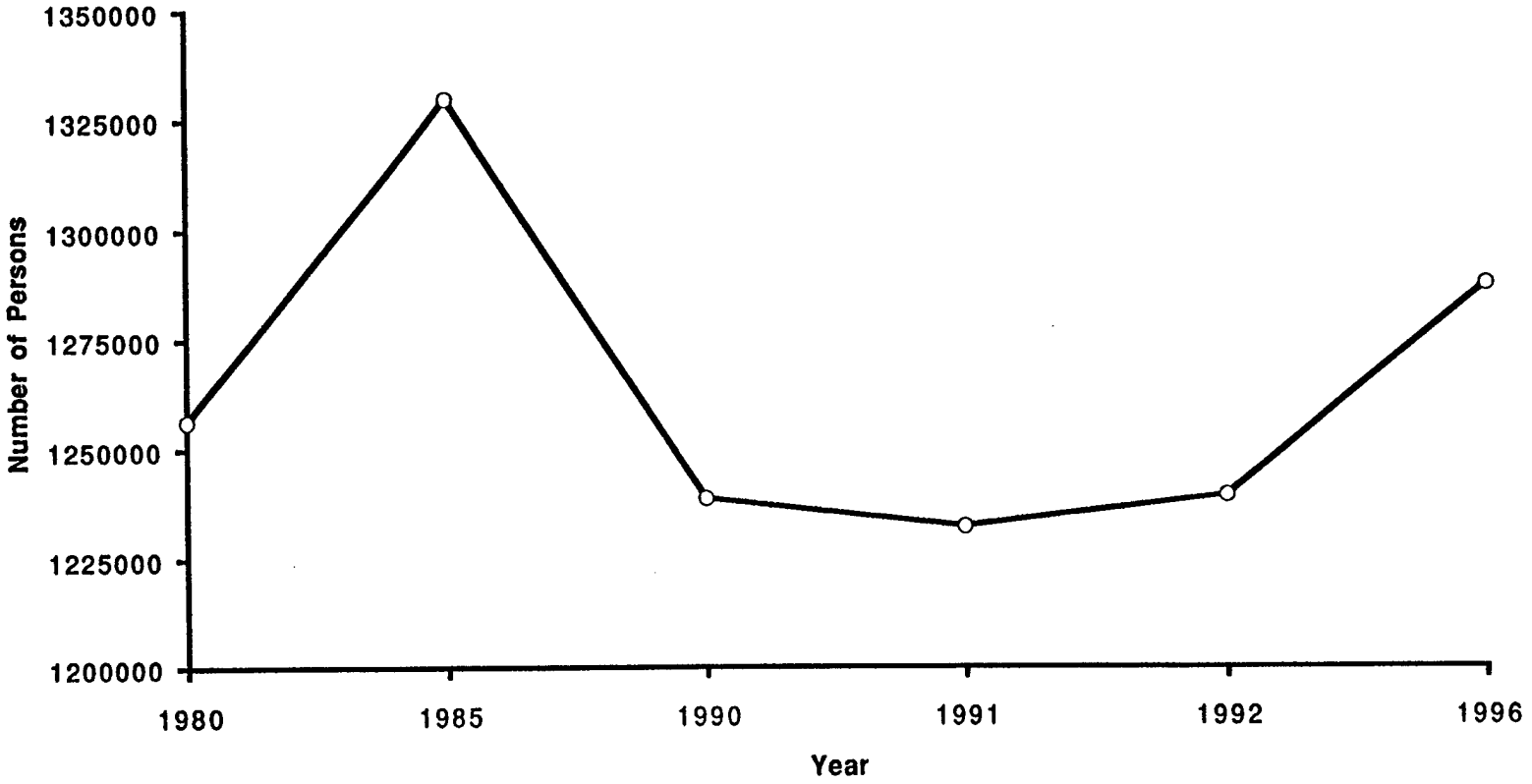

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EXHIBIT 2.4
HOUSEHOLD GROWTH TRENDS
NEW ORLEANS MSA
1980-1996

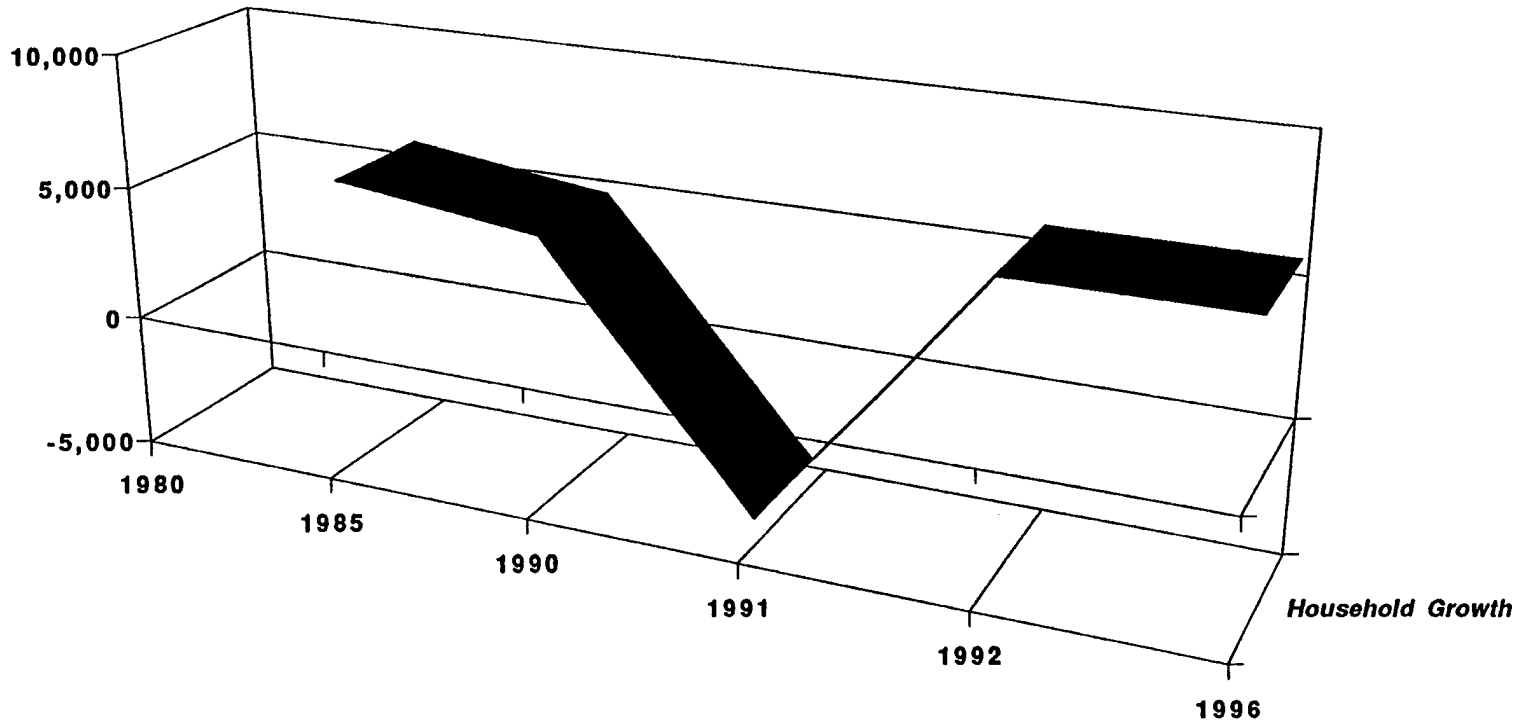

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EXHIBIT 3
AGE DISTRIBUTION OF POPULATION
FOR THE NEW ORLEANS MSA, JEFFERSON PARISH AND THE WESTBANK CMA
1980 - 1996

NEW ORLEANS MSA 1/

	1980	1985	1991 EST.	1996 PROJ.	ANN. % CHG 80-85	ANN. % CHG 85-91	ANN. % CHG 91-96
Under 6	9.8%	9.5%	9.6%	8.8%	0.5%	-1.1%	-0.8%
6 to 13	13.1%	12.5%	12.5%	12.3%	0.2%	-1.2%	0.6%
14 to 17	7.5%	6.5%	5.6%	5.7%	-1.7%	-3.4%	1.3%
18 to 20	5.7%	4.7%	4.3%	4.3%	-2.5%	-2.5%	0.9%
21 to 24	7.9%	6.6%	6.2%	5.8%	-2.3%	-2.2%	-0.5%
25 to 34	17.6%	18.5%	19.4%	16.8%	2.3%	-0.5%	-1.9%
35 to 44	11.1%	14.8%	15.1%	16.7%	8.2%	-0.9%	3.1%
45 to 54	9.6%	9.5%	9.3%	11.0%	1.0%	-1.5%	4.7%
55 to 64	8.6%	8.2%	8.1%	8.2%	0.2%	-1.4%	1.2%
65 +	9.1%	9.2%	9.9%	10.4%	1.4%	0.0%	2.0%
TOTALS	100.0%	100.0%	100.0%	100.0%	1.2%	-1.2%	0.9%

JEFFERSON PARISH

	1980	1985	1991 EST.	1996 PROJ.	ANN. % CHG 80-85	ANN. % CHG 85-91	ANN. % CHG 91-96
Under 6	9.9%	9.4%	8.9%	8.1%	-1.0%	-0.9%	-1.9%
6 to 13	13.4%	12.8%	12.2%	11.4%	-0.9%	-0.8%	-1.3%
14 to 17	7.6%	6.7%	5.8%	5.4%	-2.5%	-2.4%	-1.4%
18 to 20	5.5%	4.9%	4.3%	4.3%	-2.3%	-2.2%	0.0%
21 to 24	7.9%	6.9%	5.9%	6.5%	-2.7%	-2.6%	2.0%
25 to 34	18.8%	18.4%	17.9%	18.4%	-0.5%	-0.4%	0.6%
35 to 44	12.1%	14.0%	15.8%	16.1%	2.9%	2.1%	0.4%
45 to 54	9.8%	10.2%	10.6%	11.2%	0.8%	0.6%	1.1%
55 to 64	8.1%	8.3%	8.4%	8.2%	0.4%	0.3%	-0.5%
65 +	7.0%	8.5%	10.2%	10.4%	4.0%	3.1%	0.4%
TOTALS	100.0%	100.0%	100.0%	100.0%	0.1%	0.2%	0.4%

WEST BANK CMA 2/

	1980	1985	1991 EST.	1996 PROJ.	ANN. % CHG 80-85	ANN. % CHG 85-91	ANN. % CHG 91-96
Under 6	11.7%	10.9%	10.1%	10.2%	-1.4%	-1.3%	0.2%
6 to 13	15.0%	14.7%	14.3%	13.8%	-0.5%	-0.4%	-0.7%
14 to 17	8.4%	7.6%	6.8%	6.4%	-2.0%	-1.8%	-1.2%
18 to 20	5.9%	5.3%	4.6%	4.7%	-2.3%	-2.2%	0.4%
21 to 24	8.0%	6.9%	5.8%	6.4%	-2.9%	-2.9%	2.0%
25 to 34	18.2%	17.9%	17.5%	17.4%	-0.4%	-0.3%	-0.1%
35 to 44	12.0%	13.7%	15.3%	17.0%	2.6%	1.9%	2.1%
45 to 54	9.0%	9.7%	10.3%	10.7%	1.4%	1.1%	0.8%
55 to 64	6.5%	7.0%	7.5%	6.2%	1.5%	1.2%	-3.7%
65 +	5.4%	8.5%	7.9%	7.2%	9.5%	-1.2%	-1.8%
TOTALS	100.1%	102.0%	100.1%	100.0%	0.0%	0.0%	0.2%

NEW ORLEANS MSA 1/

	1980	1985	1991 EST.	1996 PROJ.	ANN. # CHG 80-85	ANN. # CHG 85-91	ANN. # CHG 91-96
Under 5	123,113	126,331	118,908	113,304	644	(1,337)	(1,001)
5 to 9	164,570	166,225	154,047	158,369	331	(2,030)	864
10 to 14	94,219	86,437	69,013	73,390	(1,556)	(2,904)	875
15 to 19	71,607	62,501	52,992	55,365	(1,821)	(1,585)	475
20 to 24	99,244	87,767	76,407	74,678	(2,295)	(1,893)	(346)
25 to 34	221,101	246,013	239,080	216,308	4,982	(1,155)	(4,554)
35 to 44	139,444	196,810	186,088	215,021	11,473	(1,787)	5,787
45 to 54	120,601	126,331	114,611	141,630	1,146	(1,953)	5,404
55 to 64	108,038	109,044	99,822	105,579	201	(1,537)	1,151
65 +	114,319	122,342	122,005	133,905	1,604	(56)	2,380
TOTALS	1,256,256	1,329,800	1,232,372	1,287,549	14,709	(16,238)	11,035

JEFFERSON PARISH

	1980	1985	1991 EST.	1996 PROJ.	ANN. # CHG 80-85	ANN. # CHG 85-91	ANN. # CHG 91-96
Under 5	40,459	42,939	41,027	38,149	496	(319)	(576)
5 to 9	55,460	58,470	56,239	53,691	602	(372)	(510)
10 to 14	26,366	30,605	26,737	25,432	848	(645)	(261)
15 to 19	19,547	22,383	19,822	20,252	567	(427)	86
20 to 24	26,821	31,519	27,198	30,613	940	(720)	683
25 to 34	81,372	83,822	82,515	86,659	490	(218)	829
35 to 44	71,826	63,723	72,834	75,826	(1,620)	1,519	598
45 to 54	48,187	46,593	48,863	52,749	(319)	378	777
55 to 64	38,186	37,686	38,722	38,620	(100)	173	(20)
65 +	46,368	38,828	47,020	48,981	(1,508)	1,365	392
TOTALS	454,592	456,796	460,976	470,972	441	697	1,999

WEST BANK CMA 2/

	1980	1985	1991 EST.	1996 PROJ.	ANN. # CHG 80-85	ANN. # CHG 85-91	ANN. # CHG 91-96
Under 5	19,972	18,616	17,293	17,596	(271)	(221)	61
5 to 9	25,605	25,021	24,483	23,807	(117)	(90)	(135)
10 to 14	14,339	12,980	11,642	11,041	(272)	(223)	(120)
15 to 19	10,071	8,967	7,876	8,108	(221)	(182)	46
20 to 24	13,656	11,785	9,930	11,041	(374)	(309)	222
25 to 34	31,068	30,486	29,962	30,017	(116)	(87)	11
35 to 44	20,484	23,313	26,196	29,327	566	480	626
45 to 54	15,363	16,481	17,635	18,459	224	192	165
55 to 64	11,096	11,955	12,841	10,696	172	148	(429)
65 +	9,218	14,517	13,526	12,421	1,060	(165)	(221)
TOTALS	170,701	170,791	171,213	172,513	18	70	260

Notes: 1/ NEW ORLEANS MSA INCLUDES JEFFERSON, ORLEANS, ST. CHARLES, ST. JOHN THE BAPTIST, ST. BENARD AND ST. TAMMANY PARISHES.
NOTE THAT PRIOR TO 1984, THE NEW ORLEANS MSA DID NOT INCLUDE ST CHARLES AND ST. JOHN THE BAPTIST PARISHES.
2/ THE WEST BANK CMA INCLUDES THE ENTIRE AREA LYING WEST OF THE MISSISSIPPI RIVER IN JEFFERSON PARISH.

Sources: ROBERT CHARLES LESSER & CO.
U.S. CENSUS BUREAU, UNIVERSITY OF NEW ORLEANS,
URBAN DECISION SYSTEMS

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EXHIBIT 4
HOUSEHOLD INCOME FOR THE
NEW ORLEANS MSA, JEFFERSON PARISH, AND
THE WEST BANK CMA
1990 CENSUS

	INCOME RANGES	PERCENTAGE DISTRIBUTION	NO. OF HOUSEHOLDS	PERCENTAGE OWNER OCC.
NEW ORLEANS MSA	$0 - $9,999	22.3%	101,505	
	$10,000 - $19,999	19.6%	89,215	
	$20,000 $24,999	9.0%	40,966	
	$25,000 - $29,999	7.9%	35,959	
	$30,000 $34,999	7.2%	32,773	
	$35,000 - $39,999	5.9%	26,856	
	$40,000 - $49,999	9.5%	43,242	
	$50,000 - $74,999	11.8%	53,711	
	$75,000 - $99,999	3.5%	15,931	
	$100,000 - $124,999	1.3%	5,917	
	$125,000 - $149,999	0.6%	2,731	
	$150,000 +	1.3%	5,917	
		Total Households:	455,178	58.00%

	INCOME RANGES	PERCENTAGE DISTRIBUTION	NO. OF HOUSEHOLDS	PERCENTAGE OWNER OCC.
JEFFERSON PARISH	$0 - $9,999	15.9%	26,457	
	$10,000 - $19,999	18.8%	31,283	
	$20,000 $24,999	9.4%	15,641	
	$25,000 - $29,999	9.1%	15,142	
	$30,000 $34,999	8.2%	13,645	
	$35,000 - $39,999	6.8%	11,315	
	$40,000 - $49,999	11.3%	18,803	
	$50,000 - $74,999	13.6%	22,630	
	$75,000 - $99,999	3.8%	6,323	
	$100,000 - $124,999	1.3%	2,163	
	$125,000 - $149,999	0.6%	998	
	$150,000 +	1.1%	1,830	
		Total Households:	166,398	62.85%

	INCOME RANGES	PERCENTAGE DISTRIBUTION	NO. OF HOUSEHOLDS	PERCENTAGE OWNER OCC.
WEST BANK CMA	$0 - $9,999	20.8%	11,900	
	$10,000 - $19,999	20.0%	11,443	
	$20,000 $24,999	10.2%	5,836	
	$25,000 - $29,999	9.2%	5,264	
	$30,000 $34,999	7.8%	4,463	
	$35,000 - $39,999	6.3%	3,604	
	$40,000 - $49,999	10.7%	6,122	
	$50,000 - $74,999	11.5%	6,579	
	$75,000 - $99,999	2.4%	1,373	
	$100,000 - $124,999	0.6%	343	
	$125,000 - $149,999	0.2%	114	
	$150,000 +	0.3%	172	
		Total Households:	57,213	66.71%

SOURCE: U.S. Census Bureau; Urban Decision Systems; and Robert Charles Lesser & Co.

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EXHIBIT 5
TOTAL POTENTIAL OWNER MOVERS AND HOUSEHOLD INCOME AFFORDABILITY
THE NEW ORLEANS MSA
1992 - 1996

	2/ INCOME RANGE	PERCENT HOUSE-HOLDS	EST. 1992 HOUSE-HOLDS	TOTAL HOUSEHOLDS PROPENSITY BY PRICE RANGE: 3/ OWNERS		RENTERS		OWNER TURNOVER 2.5%-10%	NEW OWNER HH'S	TOTAL RENTER CONV.	TOTAL POTENTIAL OWNER MOVERS	TOTAL OWNER MOVERS % DIST.	BASE AFFORDABLE 5/ HOME PRICE
NEW ORLEANS MSA 1/	$0 - $19,999	41.8%	191,172	36%	68,822	64%	122,350	1,376	1,164	0	2,540	13%	$0 - $40,000
	$20,000 - $29,999	16.5%	75,463	46%	34,713	54%	40,750	868	587	0	1,455	8%	$40,000 - $66,000
	$30,000 - $39,999	14.4%	65,858	70%	46,101	30%	19,757	2,305	779	395	3,480	18%	$66,000 - $90,000
	$40,000 - $49,999	10.2%	46,650	85%	39,652	15%	6,997	2,974	670	140	3,784	20%	$90,000 - $126,000
	$50,000 - $74,999	11.3%	51,680	87%	45,169	13%	6,512	4,065	764	130	4,959	26%	$126,000 - $209,000
	$75,000 - $99,999	3.1%	14,178	92%	13,044	8%	1,134	1,304	221	23	1,548	8%	$209,000 - $295,000
	$100,000 - $129,999	2.1%	9,604	96%	9,220	4%	384	922	156	8	1,086	6%	$295,000 - $400,000
	$130,000 - +	0.6%	2,744	98%	2,689	2%	55	269	45	2	317	2%	$400,000 - +
	TOTAL	100.0%	457,349	57%	259,409	43%	197,940	14,084	4,386	698	19,167	100%	
	Annual New Households: (92-96)		7,732										

1/ The MSA includes Jefferson, Orleans, St. Charles, St. John the Baptist, St. Bernard and St. Tammany Parishes.

2/ 1992 income estimates per U.S. Census 1990 census information and Urban Decision Systems.
3/ Based on 1990 census distributions owner versus renter households; Table H-8, graduated among income distributions.
4/ Based on 24-28% of gross monthly income before taxes applied toward housing, a 9.5% interest rate and 30 year term.
5/ Based on 5%-10% average down payment for incomes less than $50,000, 15% down payment for incomes between $50,000 and $75,000, and 20% down payment for incomes over $75,000.

Source: Robert Charles Lesser & Co., & U.S. Census Bureau.

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EXHIBIT 6
NONFARMING EMPLOYMENT GROWTH AND PROJECTIONS
BY MAJOR INDUSTRY SECTOR FOR
THE NEW ORLEANS, LOUISIANA MSA
1980-2000

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MAJOR INDUSTRY GROUPS	Employment Numbers in Thousands												EST.	PROJ.	PROJ.	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES	ANN. # CHANGES
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1996	2000	80-85	85-90	90-92	92-96	96-2000
NEW ORLEANS MSA																				
MINING/OTHER NONFRM.	23.86	26.16	26.79	24.74	25.49	25.78	22.09	20.26	20.63	19.78	19.38	19.59	19.95	20.41	20.88	0.38	-1.28	0.29	0.12	0.12
CONSTRUCTION	45.32	46.12	45.21	42.72	41.91	35.66	32.73	28.58	29.17	28.85	30.60	30.61	30.14	29.20	29.28	-1.93	-1.01	-0.23	-0.24	0.02
MANUFACTURING	61.98	62.41	58.00	50.95	49.19	47.38	44.99	43.35	45.10	45.85	46.33	47.72	48.23	46.05	44.24	-2.92	-0.21	0.95	-0.55	-0.45
TRANS, COMM. & UTIL.	60.23	63.03	58.01	53.73	52.78	50.50	47.54	46.73	47.42	46.99	48.12	47.89	47.79	47.00	46.81	-1.95	-0.48	-0.16	-0.20	-0.03
WHOLESALE TRADE	42.26	43.54	41.06	38.63	38.29	37.88	35.89	33.89	34.44	34.39	33.11	32.68	32.68	32.06	32.15	-0.88	-0.95	-0.22	-0.15	0.02
RETAIL TRADE	105.3	106.94	107.01	109.43	111.91	117.44	117.29	116.61	115.2	115.94	115.44	115.8	117.99	115.4	114.56	2.508	-0.394	1.165	-1.865	-0.37
FIN., INS. & REAL EST.	43.57	44.15	45.68	46.51	48.56	49.5	50.35	50.37	48.39	47.5	46.88	46.71	47.26	49.19	51.9	1.446	-0.604	0.13	0.8725	0.8775
SERVICES	131.93	137.91	146.25	149.88	157.34	160.63	166.53	166.53	168.89	174.15	193.31	208.93	215.83	234.79	259.44	5.748	4.724	3.765	7.9425	5.6635
GOVERNMENT	98.73	97.81	99.08	99.89	100.27	101.54	99.48	97.47	96.54	98.22	99.56	98.11	94.08	98.90	99.40	0.56	-0.40	-2.74	1.21	0.13
TOTAL EMPLOYMENT	632.00	648.05	647.89	635.28	652.14	646.97	630.89	617.58	625.98	632.05	641.95	648.04	651.14	673.00	698.66	2.99	-1.00	4.59	5.47	6.41
ANNUAL CHANGE	-	16.05	-0.16	-12.61	16.86	-5.17	-16.08	-13.31	8.40	6.07	9.90	6.09	3.10	5.47	6.41					

MAJOR INDUSTRY GROUPS	1980 % DIST.	1981 % DIST.	1982 % DIST.	1983 % DIST.	1984 % DIST.	1985 % DIST.	1986 % DIST.	1987 % DIST.	1988 % DIST.	1989 % DIST.	1990 % DIST.	1991 % DIST.	1992 % DIST.	1996 % DIST.	2000 % DIST.	ANN. % CHANGES 80-85	ANN. % CHANGES 85-90	ANN. % CHANGES 90-92	ANN. % CHANGES 92-96	ANN. % CHANGES 96-2000
NEW ORLEANS MSA																				
MINING/OTHER NONFRM.	3.8%	4.0%	4.1%	3.9%	3.9%	4.0%	3.5%	3.3%	3.3%	3.1%	3.0%	3.0%	3.1%	3.0%	3.0%	1.6%	-5.0%	1.5%	0.6%	0.6%
CONSTRUCTION	7.2%	7.1%	7.0%	6.7%	6.4%	5.5%	5.2%	4.6%	4.7%	4.6%	4.8%	4.7%	4.6%	4.3%	4.2%	-4.3%	-2.8%	-0.8%	-0.8%	0.1%
MANUFACTURING	9.8%	9.6%	9.0%	8.0%	7.5%	7.3%	7.1%	7.0%	7.2%	7.3%	7.2%	7.4%	7.4%	6.8%	6.3%	-4.7%	-0.4%	2.1%	-1.1%	-1.0%
TRANS, COMM. & UTIL.	9.5%	9.7%	9.0%	8.5%	8.1%	7.8%	7.5%	7.6%	7.6%	7.4%	7.5%	7.4%	7.3%	7.0%	6.7%	-3.2%	-0.9%	-0.3%	-0.4%	-0.1%
WHOLESALE TRADE	6.7%	6.7%	6.3%	6.1%	5.9%	5.9%	5.7%	5.5%	5.5%	5.4%	5.2%	5.0%	5.0%	4.8%	4.6%	-2.1%	-2.5%	-0.6%	-0.5%	0.1%
RETAIL TRADE	16.6%	16.5%	16.6%	17.2%	18.1%	18.1%	18.6%	18.9%	18.4%	18.3%	18.0%	17.9%	18.1%	18.6%	19.3%	2.4%	-0.3%	1.6%	1.6%	1.8%
FIN., INS. & REAL EST.	6.9%	6.8%	7.1%	7.3%	7.4%	7.7%	8.0%	8.1%	7.7%	7.5%	7.3%	7.2%	7.3%	7.3%	7.4%	2.4%	-1.3%	4.4%	1.8%	1.4%
SERVICES	20.9%	21.3%	22.7%	23.6%	24.1%	24.8%	26.4%	27.0%	27.0%	27.6%	30.1%	32.2%	33.1%	34.9%	37.1%	3.8%	2.4%	2.4%	1.8%	1.8%
GOVERNMENT	15.6%	15.1%	15.3%	15.7%	15.4%	15.7%	15.8%	15.8%	15.4%	15.5%	15.5%	15.1%	14.4%	14.7%	14.2%	0.6%	-0.4%	-2.8%	1.3%	0.1%
TOTAL EMPLOYMENT	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.5%	-0.2%	0.7%	0.9%	1.0%

SOURCE: ROBERT CHARLES LESSER & CO.
LOUISIANA STATE EMPLOYMENT SECURITY,
NATIONAL PLANNING ASSOCIATION, (PROJECTIONS REVISED 3/92)

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EXHIBIT 6.1
NONFARMING EMPLOYMENT GROWTH AND PROJECTIONS
BY MAJOR INDUSTRY SECTOR FOR
JEFFERSON PARISH, LOUISIANA
1980-2000

02-4680
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Sep-92

Employment Numbers in Thousands

MAJOR INDUSTRY GROUPS	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	EST. 1992	PROJ. 1996	PROJ. 2000	ANN. # CHANGES 80-85	ANN. # CHANGES 85-90	ANN. # CHANGES 90-92	ANN. # CHANGES 92-96	ANN. # CHANGES 96-2000
JEFFERSON PARISH																				
MINING/OTHER NONFRM.	5.45	5.61	5.83	5.14	5.49	5.78	4.28	3.90	3.83	3.10	3.01	3.06	3.01	2.75	2.58	0.07	-0.55	0.00	-0.06	-0.04
CONSTRUCTION	18.84	19.27	18.40	17.93	18.05	16.93	16.07	14.16	13.81	13.36	14.17	14.17	14.12	14.15	14.51	-0.38	-0.55	-0.03	0.01	0.09
MANUFACTURING	20.41	20.38	17.90	15.41	14.53	14.68	14.43	15.11	17.02	17.93	18.11	18.66	18.91	18.19	17.52	-1.15	0.69	0.40	-0.18	-0.17
TRANS, COMM. & UTIL.	15.89	17.18	17.05	16.33	16.25	16.03	15.19	14.67	14.63	14.33	14.67	14.60	14.93	15.79	16.56	0.03	-0.27	0.13	0.22	0.19
WHOLESALE TRADE	13.69	14.57	16.75	15.91	16.72	17.08	16.01	14.77	15.43	15.90	15.30	15.10	15.57	16.71	17.74	0.68	-0.36	0.14	0.29	0.26
RETAIL TRADE	40.06	41.45	43.96	45.36	49.43	51.72	51.40	50.89	50.34	50.23	50.11	50.17	51.13	58.68	65.48	2.33	-0.31	1.61	1.44	1.69
FIN., INS. & REAL EST.	10.54	11.38	11.83	12.43	13.57	14.37	15.07	15.34	17.52	17.83	17.45	17.39	18.19	20.57	23.01	1.17	0.21	0.35	0.44	0.41
SERVICES	41.03	44.78	46.42	47.38	50.18	52.99	53.94	54.35	58.46	62.14	64.76	66.87	70.37	81.73	93.84	2.30	1.91	2.81	2.84	2.82
GOVERNMENT	22.92	22.91	23.98	24.38	24.28	24.74	24.01	23.32	22.46	23.67	24.02	23.75	22.97	25.33	26.28	0.36	-0.14	-0.53	0.59	0.24
TOTAL EMPLOYMENT	188.83	197.45	202.14	202.36	210.67	216.32	212.40	208.91	213.50	218.49	221.60	223.77	230.11	253.89	276.70	5.30	1.06	4.26	5.95	5.70
ANNUAL CHANGE	-	8.62	4.69	0.22	8.31	5.65	-3.92	-3.49	4.59	4.99	3.11	2.17	6.34	5.95	5.70					

MAJOR INDUSTRY GROUPS	1980 % DIST.	1981 % DIST.	1982 % DIST.	1983 % DIST.	1984 % DIST.	1985 % DIST.	1986 % DIST.	1987 % DIST.	1988 % DIST.	1989 % DIST.	1990 % DIST.	1991 % DIST.	1992 % DIST.	1996 % DIST.	2000 % DIST.	ANN. % CHANGES 80-85	ANN. % CHANGES 85-90	ANN. % CHANGES 90-92	ANN. % CHANGES 92-96	ANN. % CHANGES 96-2000
JEFFERSON PARISH																				
MINING/OTHER NONFRM.	2.9%	2.8%	2.9%	2.5%	2.6%	2.7%	2.0%	1.9%	1.8%	1.4%	1.4%	1.4%	1.3%	1.1%	0.9%	1.2%	-9.6%	0.0%	-2.2%	-1.5%
CONSTRUCTION	10.0%	9.8%	9.1%	8.9%	8.6%	7.8%	7.6%	6.8%	6.5%	6.1%	6.4%	6.3%	6.1%	5.6%	5.2%	-2.0%	-3.3%	-0.2%	0.1%	0.6%
MANUFACTURING	10.8%	10.3%	8.9%	7.6%	6.9%	6.8%	6.8%	7.2%	8.0%	8.2%	8.2%	8.3%	8.2%	7.2%	6.3%	-5.6%	4.7%	2.2%	-1.0%	-0.9%
TRANS, COMM. & UTIL.	8.4%	8.7%	8.4%	8.1%	7.7%	7.4%	7.2%	7.0%	6.9%	6.6%	6.6%	6.5%	6.5%	6.2%	6.0%	0.2%	-1.7%	0.9%	1.4%	1.2%
WHOLESALE TRADE	7.2%	7.4%	8.3%	7.9%	7.9%	7.9%	7.5%	7.1%	7.2%	7.3%	6.9%	6.7%	6.8%	6.6%	6.4%	5.0%	-2.1%	0.9%	1.8%	1.5%
RETAIL TRADE	21.2%	21.0%	21.8%	22.4%	23.6%	23.9%	24.2%	24.4%	23.6%	23.0%	22.6%	22.4%	22.2%	23.1%	23.7%	0.6%	0.4%	2.0%	2.1%	2.9%
FIN., INS. & REAL EST.	5.6%	5.7%	5.9%	6.2%	6.4%	6.6%	7.1%	7.3%	8.2%	8.2%	7.9%	7.8%	7.9%	8.1%	8.3%	11.1%	1.3%	1.9%	3.4%	3.6%
SERVICES	21.7%	22.7%	23.0%	23.4%	23.8%	24.3%	25.4%	26.0%	27.4%	28.4%	29.2%	29.9%	30.6%	32.2%	33.9%	4.8%	4.4%	4.3%	4.8%	5.1%
GOVERNMENT	12.1%	11.6%	11.9%	12.0%	11.5%	11.4%	11.3%	11.2%	10.5%	10.8%	10.8%	10.6%	10.0%	10.0%	9.5%	1.6%	-0.6%	-2.2%	2.6%	0.9%
TOTAL EMPLOYMENT	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	2.9%	0.5%	1.9%	2.6%	2.2%

SOURCE: ROBERT CHARLES LESSER & CO.
LOUISIANA STATE EMPLOYMENT SECURITY
NATIONAL PLANNING ASSOCIATION, (PROJECTIONS REVISED 3/92)

EXHIBIT 6.2
TOTAL EMPLOYMENT
NEW ORLEANS MSA AND JEFFERSON PARISH
1980-2000

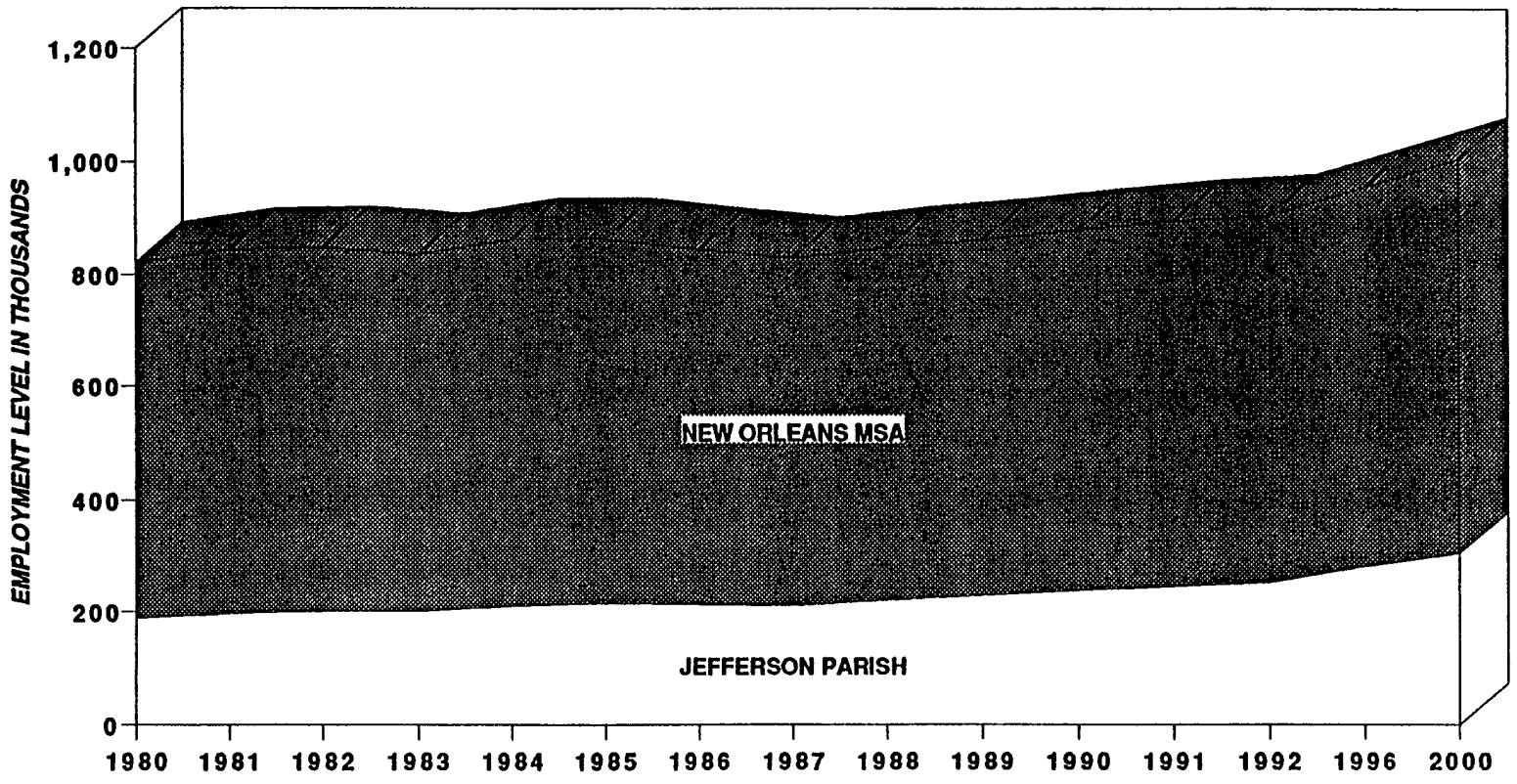

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EXHIBIT 6.3
AVERAGE ANNUAL EMPLOYMENT GROWTH
NEW ORLEANS MSA AND JEFFERSON PARISH
1980-2000

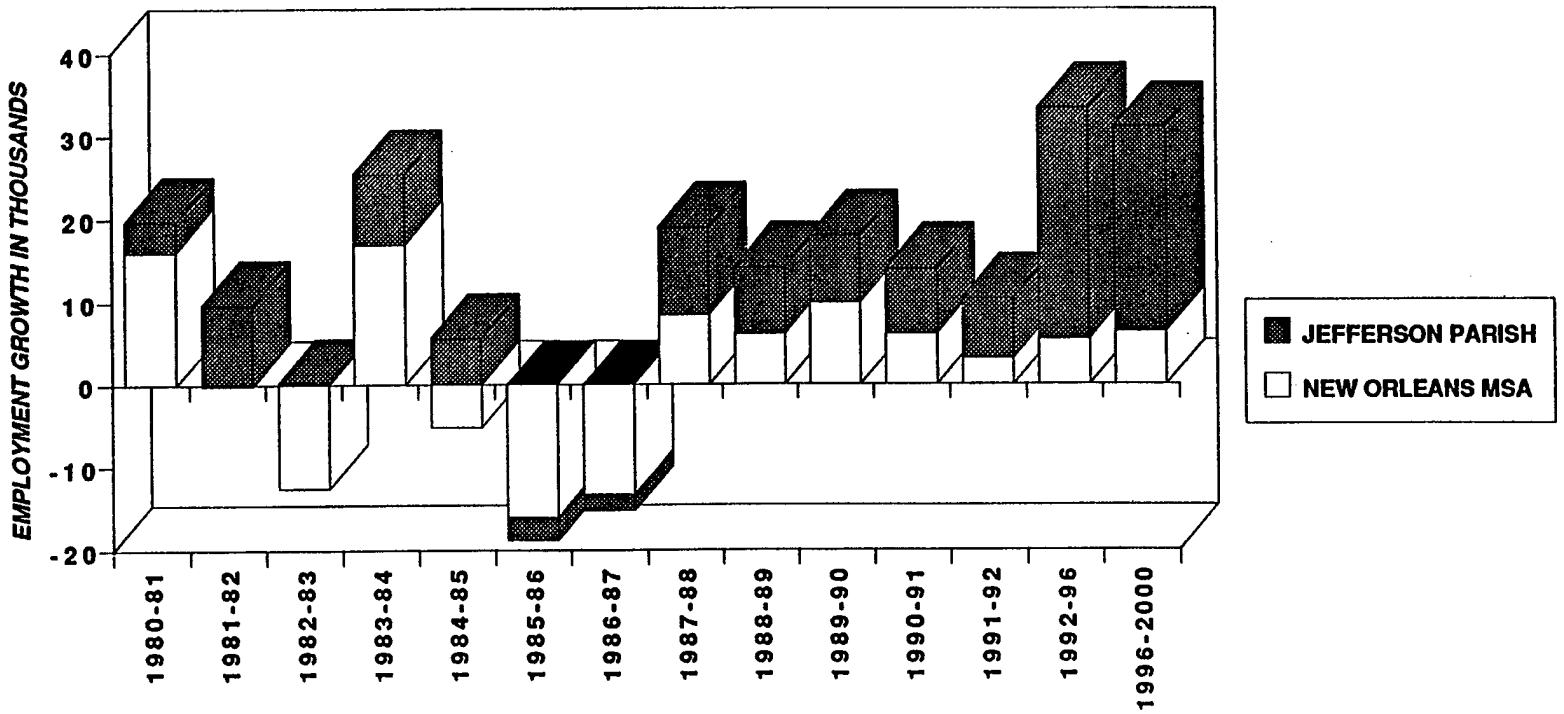

EXHIBIT 7
RESIDENTIAL UNITS AUTHORIZED BY BUILDING PERMIT
NEW ORLEANS MSA AND JEFFERSON PARISH, LOUISIANA
1980-1992

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	PROJ. 1992	AVERAGE ANNUAL AMT. OF PERMITS 80-83	84-87	88-91	AVERAGE ANNUAL MIX OF UNIT TYPE 80-83	84-87	88-91
NEW ORLEANS MSA																			
Single-family	3,917	3,057	3,762	6,431	5,993	4,187	3,257	3,077	2,211	1,966	1,970	2,228	3,113	4,292	4,129	2,094	54%	67%	86%
Multifamily	3,433	2,568	2,394	5,985	4,179	3,110	603	189	481	467	303	151	406	3,595	2,020	351	46%	33%	14%
TOTAL	7,350	5,625	6,156	12,416	10,172	7,297	3,860	3,266	2,692	2,433	2,273	2,379	3,519	7,887	6,149	2,444	100%	100%	100%
ANNUAL % CHANGE																			
Single-family	---	-22.0%	23.1%	70.9%	-6.8%	-30.1%	-22.2%	-5.5%	-28.1%	-11.1%	0.2%	13.1%	39.7%						
Multifamily	---	-25.2%	-6.8%	150.0%	-30.2%	-25.6%	-80.6%	-68.7%	154.5%	-2.9%	-35.1%	-50.2%	169.1%						
Total	---	-23.5%	9.4%	101.7%	-18.1%	-28.3%	-47.1%	-15.4%	-17.6%	-9.6%	-6.6%	4.7%	47.9%						
JEFFERSON PARISH																			
Single-family	---	1,420	1,654	2,586	2,031	1,680	1,171	951	606	602	494	530	1,956	1,887	1,458	558	60%	69%	78%
Multifamily	---	722	515	2,589	1,587	964	61	20	304	343	0	0	0	1,275	658	162	40%	31%	22%
TOTAL	---	2,142	2,169	5,175	3,618	2,644	1,232	971	910	945	494	530	1,956	3,162	2,116	720	100%	100%	100%
ANNUAL % CHANGE																			
Single-family	---	---	16.5%	56.3%	-21.5%	-17.3%	-30.3%	-18.8%	-36.3%	-0.7%	-17.9%	7.3%	269.1%						
Multifamily	---	---	-28.7%	402.7%	-38.7%	-39.3%	-93.7%	-67.2%	1420.0%	12.8%	N/A	N/A	N/A						
Total	---	---	1.3%	138.6%	-30.1%	-26.9%	-53.4%	-21.2%	-6.3%	3.8%	-47.7%	7.3%	269.1%						
JEFFERSON PARISH AS A % OF NEW ORLEANS MSA																			
Single-family	---	46.5%	44.0%	40.2%	33.9%	40.1%	36.0%	30.9%	27.4%	30.6%	25.1%	23.8%	62.8%	44.0%	35.3%	26.7%			
Multifamily	---	28.1%	21.5%	43.3%	38.0%	31.0%	10.1%	10.6%	63.2%	73.4%	0.0%	0.0%	0.0%	35.5%	32.6%	46.1%			
TOTAL	---	38.1%	35.2%	41.7%	35.6%	36.2%	31.9%	29.7%	33.8%	38.8%	21.7%	22.3%	55.6%	40.1%	34.4%	29.4%			

SOURCE: Robert Charles Lesser & Co., New Orleans Regional Planning Commission,
McGraw Hill/Dodge Local Building Construction Bulletin (1992),
Bureau of the Census, Construction Statistics Division, Building Permits Branch.

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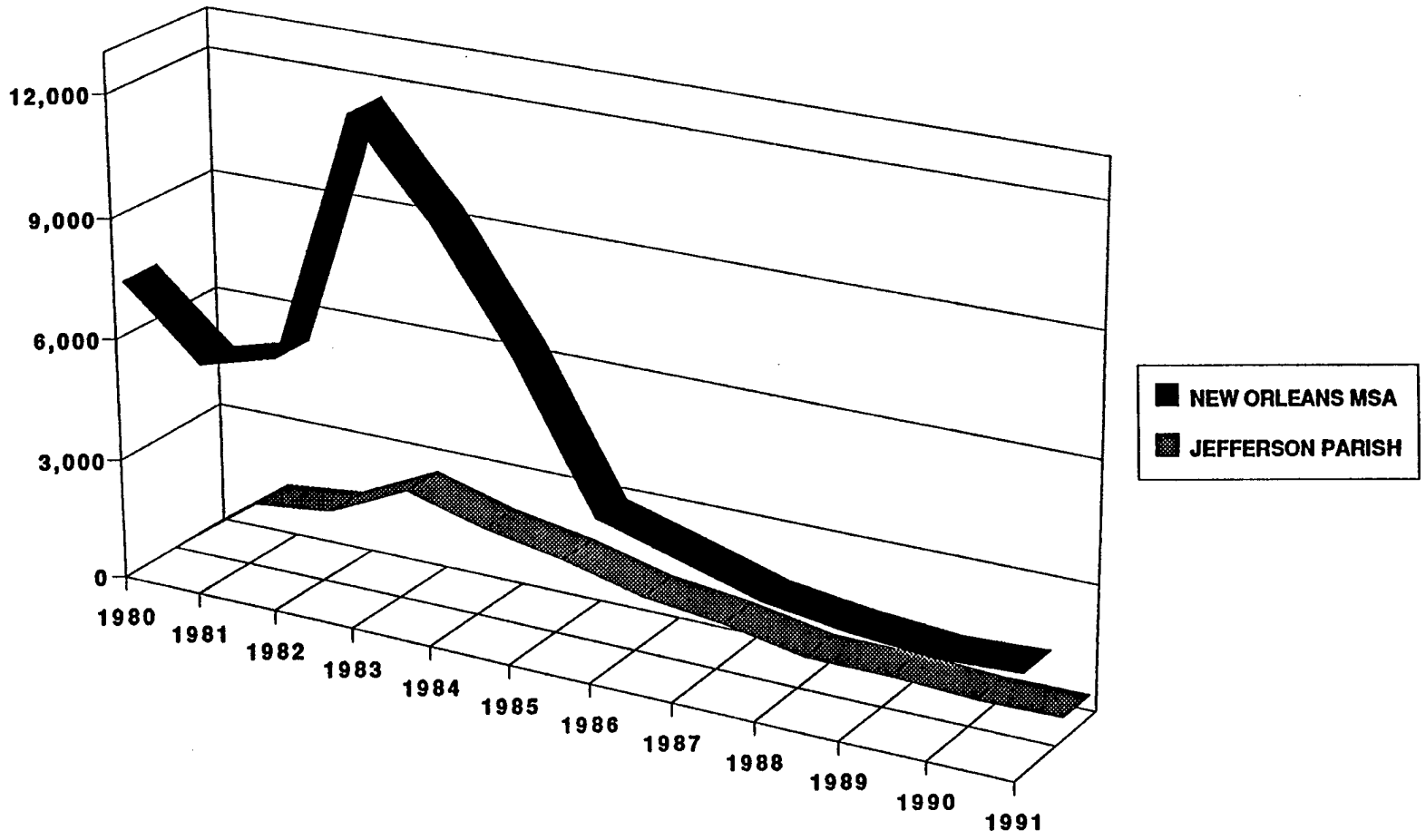
EXHIBIT 7.1
RESIDENTIAL BUILDING PERMITS
FOR NEW ORLEANS MSA AND JEFFERSON PARISH
ISSUED EACH YEAR, 1980-1991



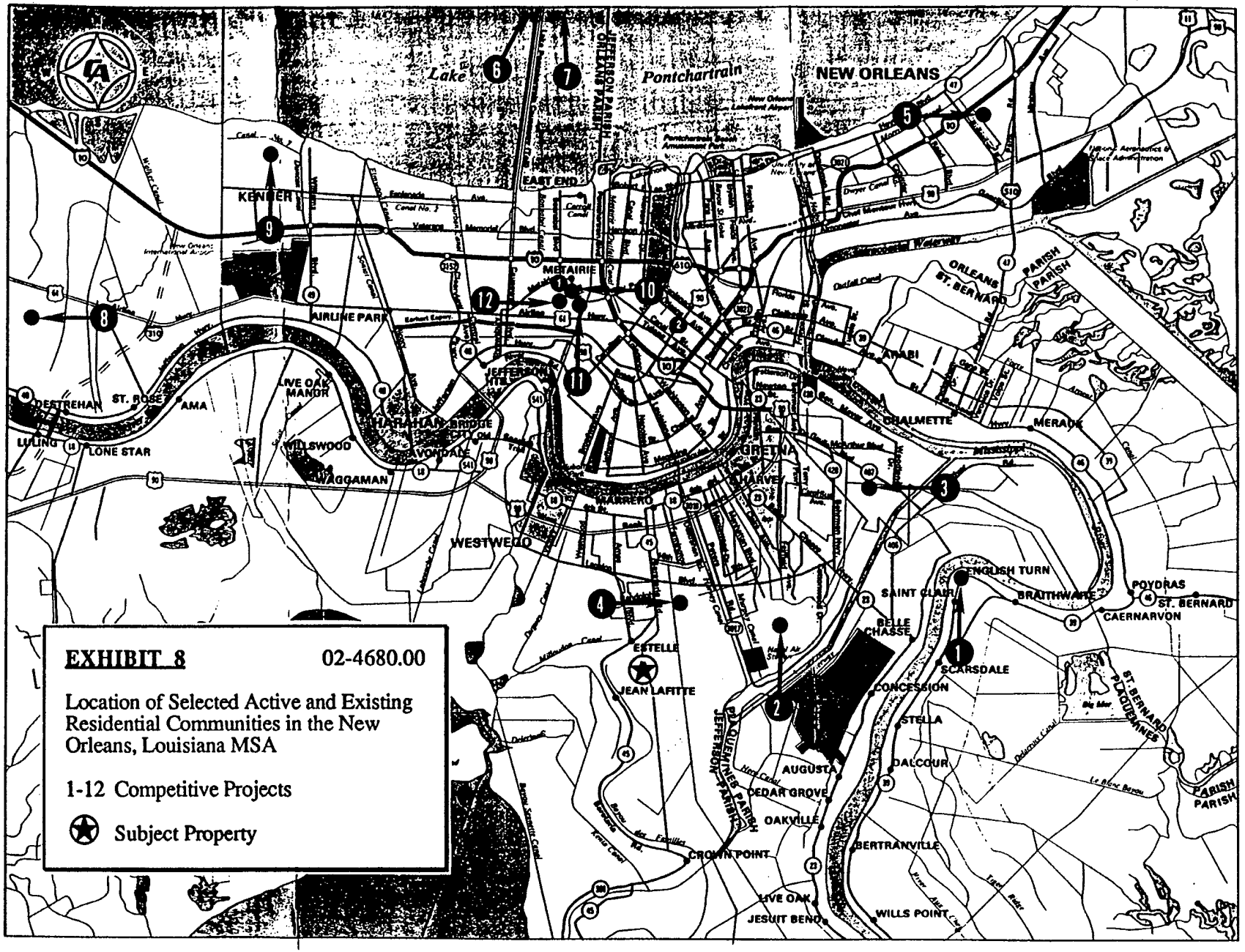


EXHIBIT 8 02-4680.00

Location of Selected Active and Existing Residential Communities in the New Orleans, Louisiana MSA

1-12 Competitive Projects

★ Subject Property

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EXHIBIT 9-A, Page 1
SUMMARY OF SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES
SURVEYED IN THE NEW ORLEANS, LA METRO AREA
SORTED BY COMMUNITY

02-4680
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Sep-92

MAP KEY	COMMUNITY	AREA	PROJECT NAME	1/ PRODUCT TYPE	ORIENTATION	2/ TOTAL LOTS/ HOMES	3/ TOTAL OFFERED	BEGAN SALES	SELL. MO.	HOMES/ LOTS SOLD	AVG. HOMES LOTS SOLD/ MO.	4/ CUR HOMES LOTS SOLD/ MO.	5/ TOTAL REMAINING LOTS/ HMS.	6/ MO. AVA. INV.	7/ MO. POT. INV.	HOME SIZE RANGE (S.F.)	HOME PRICE RANGE	VALUE RATIO $/SF	AVERAGE HOME PRICE
1	ENGLISH TURN	West Bank	POD A	SFD	GOLF	44	44	Oct-88	43	33	0.8	0.3	11	14	0	3,275 - 10,425	$354,200 - $1,354,208	$108 - $130	$587,610
			POD A	SFD	INTERIOR	68	68	Oct-88	43	50	1.2	0.3	18	15	0	2,459 - 5,000	$224,000 - $465,000	$91 - $93	$320,100
			POD B	SFD	GOLF	15	15	1990	20	7	0.4	0.3	8	20	0				
			POD B	SFD	INTERIOR	25	25	1990	20	9	0.5	0.6	16	32	0				
			POD C	SFD	INTERIOR	24	24	1991	16	9	0.6	0.5	15	25	0				
			POD V	SFD	GOLF	4	4	1990	28	1	0.0	0.0	3	3	0				
			POD D-1	SFD	GOLF	13	13	1992	4	3	0.8	0.0	10	10	0				
			POD D-1	SFD	INTERIOR	23	23	1992	4	11	2.8	0.0	12	12	0				
			REMAINING	SFD		484	0		0	0	n/a	n/a	484	n/a	n/a				
			English Turn Total			700	216		43	123	2.9	2.0	577	32	167	2,459 - 10,425	$224,000 - $1,354,208	$91 - $130	$406,450
2	STONEBRIDGE	West Bank	STONEBRIDGE PHASE I	SFD	GOLF	504	504	1981	28	504	18.0	n/a	0	0	0	n/a - n/a	$100,000 - $175,000	n/a - n/a	$137,500
			STONEBRIDGE PHASE I	SFD	GOLF	272	272	1983	112	263	2.3		9	4	0	2,800 - 4,500	$200,000 - $400,000	$71 - $89	$240,000
			STONEBRIDGE PHASE I	SFD	CANAL	55	55	1985	88	48	0.5		7	14	0	2,500 - 2,800	$160,000 - $175,000	$64 - $63	$160,000
			STONEBRIDGE PHASE I	SFD	NON-AMENITY	177	177	1983	112	165	1.5		12	8	0	2,300 - 3,200	$150,000 - $250,000	$65 - $78	$175,000
			Stonebridge Total			1,008	1,008		132	980	7.4	4.5	28	4	0	2,300 - 4,500	$150,000 - $400,000	$65 - $89	$209,400
									Phase II:		4.4	4.5							
3	LAKEWOOD ESTATES	West Bank	LAKEWOOD EST.	SFD	GOLF VIEWS	76	76	1982	124	76	1.6	n/a	Lots: 12	0	0	3,000 - 5,950	$218,000 - $650,000	$73 - $109	$275,000
			All lots originally sold several years ago, however, 12 lots are on the market for sale to be built on.														*Current prices*		
4	PLANTATION ESTATES	West Bank	PLANTATION EST.	SFD	HEAVILY TREE	430	430	Apr-85	88	420	4.8	4.2	10	2	0	2,300 - 4,000	$150,000 - $300,000	$65 - $75	$185,000
			Originally began ten years ago, and 75 lots sold prior to 4/85																
5	EASTOVER	NE New Orleans	EASTOVER SFD	SFD	LAKE/GOLF	10	10	Sep-87	57	10	0.2		0	0	0				
			EASTOVER SFD	SFD	LAKE	80	80	Sep-87	57	50	0.9		30	33	0				
			EASTOVER SFD	SFD	GOLF	58	58	Sep-87	57	21	0.4		37	93	0				
			EASTOVER SFD	SFD	DRIVING RANG	13	13	Sep-87	57	5	0.1		8	80	0				
			EASTOVER SFD	SFD	OPEN SPACE	13	13	Sep-87	57	5	0.1		8	80	0				
			EASTOVER SFD	SFD	NON-AMENITY	46	46	Sep-87	57	23	0.4		23	58	0				
			Single-family Total			220	220		57	114	2.0	1.3	128	53	0	3,000 - 4,000	$250,000 - $350,000	$83 - $88	$275,000
			PINEHURST COURT	CLS		14	14	Oct-91	8	9	1.1	0.5	5	5	0	2,300 - 2,500	$185,000 - $199,000	$80 - $80	$192,000
			EASTPOINT	CLS	GOLF	18	18	Aug-91	11	11	1.0	0.5	7	7	0	1,600 - 2,800	$114,900 - $199,000	$72 - $71	$156,950
			REMAINING EASTOVER	SFD		430	0	Jun-89	0	0	n/a	n/a	430	n/a	n/a				
			Eastover Total			682	252		53	134	2.5	2.3	676	47	172				$259,700
6	BEAU CHENE	Northshore Mandeville St. Tammany Parish	BEAU CHENE SFD	SFD	LAKE/GOLF	45	45	1975	208	45	0.2		0	0	0				
			BEAU CHENE SFD	SFD	GOLF	513	513	1975	208	504	2.4		9	4	0				
			BEAU CHENE SFD	SFD	NON-AMENITY	582	582	1975	208	501	2.4		81	34	0				
			Single-family Total			1,140	1,140		208	1,050	5.0	4.0	90	18	0	2,400 - 6,000	$185,000 - $500,000	$77 - $83	$251,000
			BEAU CHENE CONDOS	MF	WOODED/GOLF	355	355	1975	148	355	2.4	n/a	0	0	0	900 - 2,800	$49,900 - $184,900	$55 - $66	$89,000
			Beau Chene Total			1,495	1,495		208	1,405	6.8	4.0	90	13	0				$210,100

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EXHIBIT 9-A, Page 1

SUMMARY OF SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES
SURVEYED IN THE NEW ORLEANS, LA METRO AREA
SORTED BY COMMUNITY

02-4680
CARRERE
Sep-92

MAP KEY	COMMUNITY	AREA	PROJECT NAME	1/ PRO-DUCT TYPE	ORIEN-TATION	2/ TOTAL LOTS/ HOMES	3/ TOTAL OFF-ERED	BEGAN SALES	MO. SELL.	HO-MES/ LOTS SOLD	AVG. HOMES LOTS SOLD/ MO.	4/ CUR HOMES LOTS SOLD/ MO.	5/ TOTAL REMAIN-ING LOTS/ HMS.	6/ MO. AVA. INV.	7/ MO. POT. INV.	HOME SIZE RANGE (S.F.)	HOME PRICE RANGE	VALUE RATIO $/SF	AVERAGE HOME PRICE
7	GREENLEAVES	Northshore St. Tammany Parish	GREENLEAVES	SFD	NON-AMENITY	179	179	Jan-85	73	179	2.5	n/a	0	0	0	1,600 - 2,000	$107,000 - $130,000	$67 - $65	$118,500
				SFD	NON-AMENITY	224	224	Jan-85	90	220	2.4	1.9	4	2	0	2,000 - 2,300	$130,000 - $150,000	$65 - $65	$140,000
				SFD	NON-AMENITY	358	358	Jan-85	90	329	3.7	2.2	29	8	0	2,300 - 2,800	$150,000 - $175,000	$65 - $63	$162,500
				SFD	NON-AMENITY	88	88	Mar-86	76	50	0.7	0.3	38	54	0	2,800 - 3,200	$175,000 - $200,000	$63 - $63	$187,500
				SFD	LAKE	45	45	Jun-87	61	40	0.7	1.6	5	7	0	3,200 - 3,800	$200,000 - $260,000	$63 - $68	$230,000
						894	894		90	818	9.1	6.0	76	8	0	1,600 - 3,800	$107,000 - $260,000	$67 - $68	$151,600
8	ORMOND COUNTRY CLUB	St. Charles Parish	ORMOND GOLF	SFD	GOLF	200	200	1982	124	196	1.6	0.8	4	3	0		$200,000 - $700,000		$250,000
			ORMOND NON-GOLF	SFD	NON-AMENITY	1,152	1,152	Dec-78	162	1,040	6.4	3.4	112	18	0		$93,000 - $200,000		$125,000
			ORMOND PLANTATION	SFD	ESTATES	148	148	1982	124	134	1.1	0.8	14	13	0		$178,500 - $300,000		$212,000
			Ormond Total			1,500	1,500		162	1,370	8.5	5.0	282	15	0	1,600 - 8,000	$93,000 - $700,000	$58 - $88	$151,000
9	CHATEAU ESTATES	Kenner Jefferson Parish	CHATEAU ESTATES	SFD	GOLF	400	400	1975	148	396	2.7	0.5	4	1	0	1,750 - 6,500	$96,000 - $745,000	$55 - $115	$200,000
						Most homes were built and sold prior to 1986.													
														New Homes:		4,022 - 6,500	$549,000 - $745,000	$136 - $115	$575,000
10	OAKBRIDGE PARK	Old Metarie East Bank Orleans Parish	OAKBRIDGE PARK	SFD	IN-TOWN	65	65	1927 original date	n/a	65	n/a	n/a	0	n/a	n/a	3,600 - 5,000	$359,900 - $700,000	$100 - $140	$398,000
11	FARNHAM PLACE	Old Metarie East Bank Orleans Parish	OLD METARIE	SFD	IN-TOWN	70	70	1947 original date	n/a	70	n/a	n/a	0	n/a	n/a	5,600 - 6,000	$410,000 - $800,000	$114 - $133	$518,000
12	METARIE CLUB GARDENS	Old Metarie East Bank Orleans Parish	OLD METARIE	SFD	IN-TOWN METARIE COUNTRY CLUB & GOLF COURSE	200 est.	200	1939 original date	n/a	200	n/a	n/a	0	n/a	n/a	3,000 - 6,240	$359,000 - $1,250,000	$120 - $200	$550,000
	TOTAL					7,520	6,606			6,057	46.3	28.5	1,755						
	WEIGHTED AVERAGE										4.5	3.6		12	20				$191,700

1/ SFD-Single-Family Detached; CLS-Cluster Homes; MF-Multifamily attached.
2/ Total number of homes once the development is complete.
3/ Total number of lots and/or speculative homes offered for sale to date to prospective buyers.
4/ Average monthly sales absorption over the most recent twelve month period.
5/ Total remaining lots and units to be sold, including future phases.
6/ Estimated length of time to sell-off existing inventory of lots/units offered, but unsold, based on average sales rate.
7/ Estimated length of time to absorb potential inventory of lots/units planned to be offered (future phases), based on sales rate.
SOURCE: ROBERT CHARLES LESSER & CO.

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EXHIBIT 9-A, Page 2
SUMMARY OF SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES
SURVEYED IN THE NEW ORLEANS, LA METRO AREA
SORTED BY COMMUNITY

02-4680
CARRERE
Sep-92

MAP KEY	PROJECT NAME	PREMIUM TYPE	8/ LOT PRICE RANGE	AVERAGE LOT PRICE	9/ AVG LOT SIZE (SQ. FT.)	LOT FRONT-AGE	LOT TO HOME RATIO	10/ LOT PREMIUMS	LOT SALES TO WHOM	% SALES TO IND. CON-SUMERS	BUILDER LOT PROG.	NUMBER OF BUILDERS	DEVELOPER/ BUILDER GROUP
1	ENGLISH TURN-POD A	GOLF	$120,000 - $305,000	$169,800	14,692 - 45,213	100	29%	$51,000 - $100,000	BLDR/IND	88%	YES		Builders include Spencersmith, Inc.,
	ENGLISH TURN-POD A	INTERIOR	$69,000 - $205,000	$105,515	13,500 - 40,131		33%	$0 - $0	BLDR/IND	69%	YES		R.J. Messinger, Inc., Greater
	ENGLISH TURN-POD E	GOLF	$143,000 - $250,000	$204,667	21,600 - 33,970			$60,000 - $110,000	BLDR/IND	80%	YES		Southern Homes, and Oster Dev.
	ENGLISH TURN-POD E	INTERIOR	$83,000 - $140,000	$104,600	15,640 - 26,840			$0 - $0	BLDR/IND	75%	YES		Approx. 80% of homes are custom;
	ENGLISH TURN-POD C	NON-AMENITY	$113,500 - $180,000	$144,833	23,948 - 51,268			-	BLDR/IND	83%	YES		builders have plan portfolio.
	ENGLISH TURN-POD V	GOLF	$190,000 - $220,000	$201,250				$76,500 - $40,000	BLDR/IND	n/a	YES		
	ENGLISH TURN-POD D	GOLF	$125,000 - $175,000	$151,230	19,490 - 33,550			$79,000 - $100,000	BLDR/IND		YES		
	ENGLISH TURN-POD D	INTERIOR	$74,500 - $96,000	$84,800	12,614 - 22,033				BLDR/IND		YES		
	REMAINING ENGLISH		n/a - n/a	n/a					BLDR/IND		YES		
		English Turn Total	$69,000 - $305,000	$136,745	13,500 - 51,268		34%	$40,000 - $110,000				4	
2	STONEBRIDGE	NON-GOLF/GOLF	$25,000 - $30,000	$27,500	12,000 - 15,000	80	20%	n/a - n/a	BLDR/IND	n/a	n/a	sold-out	Dr. Ed Darvin
		GOLF	$40,000 - $68,750	$56,000	10,000 - 25,000	90-125	23%	$10,000 - $18,850	BLDR/IND		NO		Marrero Land purchased remaining
		CANAL	$31,000 - $33,000	$32,000	10,800 - 13,600	80	20%	$1,000 - $3,000	BLDR/IND		NO		lots from DLC.
		NON-AMENITY	$30,000 - $49,900	$35,000	10,000 - 25,000	75-120	20%	$0 - $0	BLDR/IND		NO		Spec inventory: 12-15 homes
		Stonebridge Total	$25,000 - $68,750	$46,000	10,000 - 25,000		22%	$1,000 - $18,850		50%		10	
3	LAKEWOOD ESTATES	GOLF VIEWS	$45,000 - $68,000 *current prices*	$56,500	7,700 - 9,900	70-90	21%	$18,000 - $23,000	BLDR/IND	MOST	NO	n/a	Project is sold-out, however 12 lots remain. Builders are custom-home bidders.
4	PLANTATION ESTATES	HEAVILY TREED	$33,000 - $38,000	$37,000	9,600 - 17,500	75-90	20%	$2,000 - $5,000	BLDR/IND	50%	NO	7	Marrero Land Co./Small builders
5	EASTOVER SFD	LAKE/GOLF	$71,500 - $71,500	$71,500	16,000 - 16,000	90		$12,500 - $11,500	BLDR/IND		NO		Have a total of eight approved builders
	EASTOVER SFD	LAKE	$66,500 - $69,000	$67,750	13,000 - 17,800	75-95		$7,500 - $9,000	BLDR/IND		NO		in Builder Program. Try to maintain
	EASTOVER SFD	GOLF	$65,000 - $71,500	$68,250	14,200 - 20,000	90-100		$6,000 - $11,500	BLDR/IND		NO		approximately three to four specs in
	EASTOVER SFD	DRIVING RANGE	$66,500 - $67,000	$66,750	16,000 - 21,780	90		$7,500 - $7,500	BLDR/IND		NO		inventory. Recently sold all
	EASTOVER SFD	OPEN SPACE	$75,000 - $75,000	$75,000	16,000 - 16,000	90		$15,000 - $15,000	BLDR/IND		NO		remaining spec inventory.
	EASTOVER SFD	NON-AMENITY	$59,000 - $60,000	$59,500	12,482 - 18,700	90-110		$0 - $0	BLDR/IND		NO		
		Eastover SFD	$62,357 - $64,571	$63,464	12,482 - 21,780		23%			75%		8	
	PINEHURST COURT	INTERIOR/LAKE	$45,000 - $45,000	$45,000	7,500 - 10,000	70	23%	$0 - $0	BLDR/IND	50%	NO		
	EASTPOINT	INTERIOR/LAKE	$35,000 - $45,000	$40,000	7,487 - 14,454	65-70	25%	$4,000 - $5,000	BLDR/IND	0%	YES	1	Cage Contractors purchased most of lots
	REMAINING EASTOVER												
		Eastover Total	$35,000 - $75,000		7,487 - 21,780			$4,000 - $15,000					
6	BEAU CHENE SFD	LAKE/GOLF	$130,000 - $150,000	$140,000	20,000 - 43,560	100		$71,000 - $90,000	BLDR/IND		NO		A total of 15 builders in 1991, and
	BEAU CHENE SFD	GOLF	$80,000 - $85,000	$85,000	14,000 - 20,000	100		$21,000 - $25,000	BLDR/IND		NO		19 spec homes built in 1991.
	BEAU CHENE SFD	NON-AMENITY	$49,900 - $70,000	$55,000	14,000 - 20,000	100		$0 - $0	BLDR/IND		NO		
		Beau Chene SFD	$73,725 - $95,000	$73,000	14,000 - 43,560		29%			66%		10-15	
	BEAU CHENE CONDO	WOODED/GOLF	n/a - n/a	n/a	n/a - n/a			n/a - n/a					
		Beau Chene Total	$49,900 - $150,000	$73,000	14,000 - 43,560	100		$21,000 - $90,000					

SUMMARY OF SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES
SURVEYED IN THE NEW ORLEANS, LA METRO AREA
SORTED BY COMMUNITY

MAP KEY	PROJECT NAME	PREMIUM TYPE	8/ LOT PRICE RANGE	AVERAGE LOT PRICE	9/ AVG LOT SIZE (SQ. FT.)	LOT FRONT-AGE	LOT TO HOME RATIO	10/ LOT PREMIUMS	LOT SALES TO WHOM	% SALES TO IND. CON-SUMERS	BUILDER LOT PROG.	NUMBER OF BUILDERS	DEVELOPER/ BUILDER GROUP
7	GREENLEAVES	NON-AMENITY	$21,400 - $26,000	$23,700	9,600 - 10,200	80-85	20%	n/a - n/a	BUILDER	n/a			Builders include Grand Homes, Inc.
		NON-AMENITY	$26,000 - $30,000	$28,000	10,800 - 13,500	85-90	20%	n/a - n/a	BLDRS.	n/a			Koster Homes, John Jay Plose Builders,
		NON-AMENITY	$30,000 - $35,000	$32,500	13,500 - 16,000	90	20%	n/a - n/a	BLDRS.	n/a			Southern Homes, Coeval Custom Bldrs,
		NON-AMENITY	$35,000 - $40,000	$37,500	17,000 - 20,000	100	20%	n/a - n/a	BLDRS.	n/a			Herning, Greenleaves Bldrs, Inc., etc.
		LAKE	$40,000 - $55,000	$47,500	24,000 - 28,000	130	21%	$15,000 - $15,000	BLDRS.	n/a	YES	4-5	
		Greenleaves Total	$21,400 - $55,000	$30,860	9,600 - 28,000		20%	$15,000 - $15,000				10+	
8	ORMOND COUNTRY CLUB	GOLF	$60,000 - $76,000	$65,000	15,000 - 17,000	100		$32,500 - $48,500	BLDR/IND		NO		There have been several builders in
		NON-AMENITY	$20,000 - $35,000	$27,500	7,700 - 12,000	70-80			BLDR/IND		NO		Ormond, although the number has
		ESTATES	$40,000 - $50,000	$45,000	43,560 - 43,560	120		n/a - n/a	BLDR/IND		NO		diminished in the last few years.
		Ormond Total	$20,000 - $76,000	$34,200	7,700 - 43,560		23%	$32,500 - $48,500		15%		10-15	
9	CHATEAU ESTATES	GOLF	$19,900 - $160,000	$40,000	6,600 - 22,500	60-150	20%		BLDR/IND.	n/a	n/a	n/a	Four sections of Chateau Estates, and
		Current lot prices:	$140,000 - $160,000	$150,000	21,780 - 22,500	120-150	26%	$50,000 - $60,000	BLDRS.	n/a	NO		each featured different builders/price points. Small custom home builders.
10	OAKBRIDGE PARK	NONE	$150,000 - $160,000	$150,000	11,280 - 13,440	94-112	38%	n/a - n/a	n/a	n/a	n/a	n/a	Builders purchasing smaller existing homes, tearing them down and building new, larger, more luxurious homes from $500,000 and up.
		current prices, including smaller older homes											
11	FARNHAM PLACE	NONE	$150,000 - $175,000	$162,500	10,625 - 12,150	85-90	31%	n/a - n/a	n/a	n/a	n/a	n/a	Builders purchasing smaller existing homes, tearing them down and building new, larger, more luxurious homes from $500,000 to $800,000.
		current prices, including smaller older homes											
12	METARIE CLUB GARDENS	GOLF VIEWS	$125,650 - $250,000	$165,000	11,250 - 29,600	75-200	30%	n/a - n/a	n/a	n/a	n/a	n/a	According to Realtors and builders, there are no vacant lots in area. However, new homes have been built as late as last year from tearing down existing homes.
		Lot value											
		WEIGHTED AVERAGE	$36,800 - $58,900	$43,200	11,200 - 17,700	80-120	23%	Range $1,000 - $110,000		58%		10	

8/ Range in lot prices offered, included premiums.
9/ Range of lot sizes in square feet.
10/ Premiums for view lots charged above base lot prices.
SOURCE: ROBERT CHARLES LESSER & CO.

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EXHIBIT 9-A, Page 3
SUMMARY OF SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES
SURVEYED IN THE NEW ORLEANS, LA METRO AREA
SORTED BY COMMUNITY

02-4680
CARRERE
Sep-92

MAP KEY	PROJECT NAME	11/ BUYER PROFILE SING/ COUP / FAM / B.N. / RET.	GEOGRAPHIC ORIGIN OF BUYERS	12/ COMMUNITY AMENITIES	ANNUAL MANDATORY HOME-OWNERS FEE	HOLES OF GOLF	COURSE DESIGNER	GOLF/ COUNTRY CLUB	INITIATION FEE	MONTHLY DUES	ANNUAL ROUNDS OF GOLF	CLUB-HOUSE SIZE (SQ. FT.)	COMMENTS
1	ENGLISH TURN	8% / 80% / 10% / 2%	Approximately 17% transferees, 35% from the East Bank and 49% from the West Bank.	G,LK,P,T,CC,SBC	$1,260	18	JACK NICKLAUS	PRIVATE	$16,500 50% refundable	$210	18,000	43,000	450 golf memberships; 250 current members Approx. 70% of property owners are club members, but only three are golf members.
2	STONEBRIDGE	15% / 60% / 20% / 5%	Primarily local move-ups; some transferees, but not as many as in past years.	G,CC,T,P	OPTIONAL: $216 (security patrol)	27	LOCAL	PRIVATE	$500	$90	35,000	33,000	Only approx. 20% of members are residents. 560 total members; 75% golf members. Family-oriented & social
3	LAKEWOOD ESTATES	10% / 70% / 20% / 0%	Oil Company relocations	SECURITY ADJACENT TO GOLF COURSE	$670	18	ROBERT HARRIS	PRIVATE	$5,000	$165	20,000	25,000 est.	Golf club (not a social C.C.) with 300 members Club is not family-oriented.
4	PLANTATION ESTATES	15% / 70% / 10% / 5%	Primarily local move-up buyers	NONE	$60 Not mandatory	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Property features several oak trees
5	EASTOVER SFD	10% / 60% / 20% / 10%	Approx. 75% from New Orleans (Orleans Parish) and 25% transferees.	P,T,G,CC,SBC	$720	18	JOE LEE	SEMI-PRIVATE	$1,500	$125	40,000	15,000	Golf is operated as a public golf course - bottom line driven vs. service-oriented. Automatic membership with property purchase. Members are unhappy. Dev. gave away golf to generate money, & in the process has hurt the project & club.
	PINEHURST COURT	15% / 5% / 65% / 15%		P,T,G,CC,SBC	$125								
	EASTPOINT	20% / 0% / 70% / 10%		P,T,G,CC,SBC	$125								
	REMAINING EASTOVER			P,T,G,CC,SBC									
	Eastover Weighted Average	11% / 51% / 27% / 10%											
6	BEAU CHENE SFD	10% / 66% / 20% / 10%	Currently, move local New Orleans buyers, but have had as much as 80% transferees. Approximately 60% of buyers commute to work outside parish.	P,T,G,CC,SBC,LK	$849	36	JOE LEE	PRIVATE	$5,000	$120	55,000	30,000 est.	Golf club members include two groups: retirees and 35-50 yr. old families with children. Approx. 75% live in Beau Chene.
	BEAU CHENE CONDOS	25% / 5% / 15% / 55%			$283								
	Beau Chene Weighted Avg.	14% / 51% / 19% / 21%											

EXHIBIT 9-A, Page 3
SUMMARY OF SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES
SURVEYED IN THE NEW ORLEANS, LA METRO AREA
SORTED BY COMMUNITY

MAP KEY	PROJECT NAME	11/ BUYER PROFILE SING./ COUP / FAM / E.N. / RET.	GEOGRAPHIC ORIGIN OF BUYERS	12/ COMMUNITY AMENITIES	ANNUAL MANDATORY HOME-OWNERS FEE	HOLES OF GOLF	COURSE DESIGNER	GOLF/ COUNTRY CLUB	INITIATION FEE	MONTHLY DUES	ANNUAL ROUNDS OF GOLF	CLUB-HOUSE SIZE (SQ. FT.)	COMMENTS
7	GREENLEAVES	30% / 55% / 10% / 5% 25% / 65% / 10% / 0% 20% / 65% / 15% / 0% 15% / 70% / 15% / 0% 5% / 75% / 15% / 5% 22% / 64% / 13% / 1%	Primarily transferees who work in New Orleans, Jefferson Parish or local area.	JOGGING TRAIL OPEN SPACE	$288	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Community does not feature golf.
8	ORMOND COUNTRY CLUB	20% / 65% / 10% / 5%	Buyers include families moving out of Jefferson Parish & New Orleans seeking a better quality of life and less density/congestion.	P,T,G,CC,PK,NP	DO NOT HAVE HOA FEES	18	LOCAL	PRIVATE	$1,000 EQUITY	$106	40,000	20,000	Approx. 80% members live in Ormond, representing 90% of golf play Social, family-oriented
9	CHATEAU ESTATES	15% / 75% / 5% / 5%	Transferees and local move-ups	G,CC,P,T	n/a	18	EVERETT ALLEMAN	PRIVATE	$2,500	$125	40,000	20,000 est.	A total of 700 members; approx. 25% live in project.
10	OAKBRIDGE PARK	5% / 70% / 20% / 5%	Transferees and local move-ups	Near private schools and "old money" country Sidewalks	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Small neighborhood in Old Metarie area.
11	FARNHAM PLACE	0% / 75% / 25% / 0%	Transferees and local move-ups	Near private schools and "old money" country clubs, etc. Sidewalks	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Small neighborhood in Old Metarie area.
12	METARIE CLUB GARDENS	Primarily families, ages mid-30's to to 40's and empty nesters/retirees ages 50's and 60's. Many are members of country club.	Transferees and local move-ups	Near private schools and "old money" country clubs, etc. Sidewalks	n/a	18	LOCAL	PRIVATE	$16,000 ($5,000 is equity)	$200	31,000	45,000 est.	Club is considered prestigous, old money club. A total of 1,200 members (40% golf members) and a 4-6 yr. waiting list.
							Nearby New Orleans C.C. is $21,000 init. & $165/mo.						
	WEIGHTED AVERAGE	16% / 60% / 15% / 8%			$460	21			$5,333	$143	per 18 32,800	28,900	

11/ SING./COUP.-Singles and couples; FAM-Families with children; E.N.-Empty Nesters; RET.-Retirees.
12/ CC-Country Club; G-Golf; T-Tennis; P-Pool; LK-Lake; TR-Trails; PK-Park; NP-Nature Preserve; SEC-Security
SOURCE: ROBERT CHARLES LESSER & CO.

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EXHIBIT 9-A, Page 4
SUMMARY OF SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES
SURVEYED IN THE NEW ORLEANS, LA METRO AREA
SORTED BY COMMUNITY

02-4680
CARRERE
Sep-92

MAP KEY	PROJECT NAME	TYPE OF COMMUNITY/ MARKET POSITIONING	POSTIVES/NEGATIVES OF PROJECT: POSITIVES	NEGATIVES	COMMENTS
1	ENGLISH TURN	High-end, luxury golf and residential community.	Quality development, high finish, prestige assoc. with club and golf course, secured community	On the "wrong side of town; wrong side of the river" - West Bank	An approximate 880-acre golf and residential community developed by Nicklaus-Sierra Dev., Classic Properties and USF&G. Lot prices in community have increased by 10% to 12% since the project began in 1988. Buyers include executives, doctors, and small business owners. Approximately 31% of sales resulted from referrals and 26% from Realtors.
2	STONEBRIDGE	Residential community with moderately priced golf course.	Affordable golf course and availability of play; good variety of quality, attractive custom-built homes.	Lack of Security and on-site marketing; surrounding land uses; congested traffic area	Stonebridge was the site for the 1991 Homebuilders Parade of Homes. According to sales professionals representing project, success of the community is tied to their special financing, arranged for purchase of 1.5% below prime, 15 year amort with 5 year ballon which offers young couples an opportunity to purchase a lot and have five years to build. Offer discounts if build home within 3 months.
3	LAKEWOOD ESTATES	Gated, secure community next to existing golf course	Security Considered small, exclusive project	Sold-out, although agents actively marketing lots	Project features 24-hour security with pass card, iron gates and brick wall. Some lots view golf course through the iron gates, and although not directly on the course, these lots are very popular and carry a premium price.
4	PLANTATION ESTATES	Heavily treed residential community	Project on a ridge - high land with lots of trees	No security, no on-site amenities or marketing	Well located residential community near shopping, hospital and other local employment. Not far from bridge to city. Custom builders.
5	EASTOVER	Secured residential community with a "public" golf course.	Security attractive entry	Crowded golf course retail encroaching upon residential These have hurt image of the community.	Project had the potential to be a quality golf-oriented community. However, the developer sold surrounding properties for retail development and left little buffer between residential, negatively impacted the value of the community and residential neighborhoods. In addition, while the golf course is viewed by the market as second in quality only to English Turn, the developer created a public golf course and sold memberships to non-residents, thus maximizing the golf course before selling out the project. As a result, future homeowners have little opportunity to play golf on the already crowded golf course. Members are unhappy and the club is not operated as a service-oriented club and does not benefit future development in the community.
6	BEAU CHENE	Very family-oriented, upper-end community. Began as a retiree/ second-home community.	Good public schools Quality of life - recreation, low crime, open space, trees, security	Distance from New Orleans and employ-ment, Age of community	Beau Chene is a acre development which began in 1975 by the Earnest Corporation. The golf and lake-oriented community began as a retirement and second-home project and has evolved with the Mandeville area into a family-oriented community. Beau Chene offers a high quality life style for families, including an area of good public schools, recreation centers, parks, soccer, lake amenities, and in the project: 36 holes of golf, pools, lakes, 8 tennis courts in a heavily treed setting and park-like environment.

SUMMARY OF SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES
SURVEYED IN THE NEW ORLEANS, LA METRO AREA
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MAP KEY	PROJECT NAME	TYPE OF COMMUNITY/ MARKET POSITIONING	POSITIVES/NEGATIVES OF PROJECT: POSITIVES	NEGATIVES	COMMENTS
7	GREENLEAVES	Moderately priced large-scale residential community - very popular/respected PUD. Marketing through local real estate community.	Good schools and local recreational areas/ centers.	Community does not feature amenities, such as parks and passive recreation areas. No on-site sales or community info. center	Original developer parceled off and sold sections to various dev./bldrs. Greenleaves currently features 13 separate neighborhoods of homes. Initially, lots were sold to consumers in order to get sales going. Now, lots are offered to builders only. Sales are through local builders/outside realty companies. According to real estate agents in the Mandeville area, homes in this project "sell very fast".
8	ORMOND COUNTRY CLUB	Very family-oriented, moderately priced community with nature preserve, trees, etc.	Good public schools Quality of life - recreation, low crime, open space, trees, value	Distance from New Orleans and employ- ment,	Ormond is a development surrounded by wetlands, a former southern plantation area. Family-oriented community with good public schools, low crime rate, parks, animals & ducks. Community will be linked to I-10 via the new I-310 connector which is scheduled to open in 1993. The connector is less than two miles east of the project and will bring better link Ormond to New Orleans, lessening the commute. Project selling value and quality of life.
9	CHATEAU ESTATES	Golf-oriented PUD with moderate to luxury priced homes	Variety of homes Project near I-10 Near Esplanade S.C.- considered good area.	Older project - starts and stops. No security	Older golf course community with most homes built back in the 1970's. Homes overlooking the golf course are $200,000 and above; most are priced between $200,000 and $300,000. Prices of few remaining lots have escalated to over $100,000 with homes from $400,000+.
10	OAKBRIDGE PARK	In-town, upper-end neighborhood.	Quality homes in an area referred to as the "preferred area" of New Orleans.	Crime and traffic congestion No security	The majority of the older homes have been partially or totally refurbished and feature hardwood floors, high ceilings, guest homes, pool behind home, etc., Property is well-treed with mature hardwoods. The community is family-oriented with both young and older children.
11	FARNHAM PLACE	In-town, upper-end neighborhood. Stately homes and entry	Homes maintain value, high price. High image/prestigous area	Crime and traffic congestion No security	The majority of the older homes have been partially or totally refurbished and feature hardwood floors, high ceilings, guest homes, pool behind home, etc. Stone columns at entry. Brick homes. Entry into project includes divided street with huge oak trees. *Other projects include Cottam Park on Mulberry Street.*
12	METARIE CLUB GARDENS	In-town, upper-end neighborhood near and overlooking the Metarie Country Club and golf course.	Homes maintain value, high price. High image/prestigous area, prestigous club	Crime and traffic congestion No security	This neighborhood is considered one of "The finest" in New Orleans. Refurbished homes include entertainment areas, pool or Jacuzzi, guest quarters, greenhouse, etc. Interiors include marble foyers, hardwood floors, wet bar, fireplaces, corian counters, ceramic tile, security, deck and/or sunroom. Yards are well landscaped with flower gardens and mature trees.

pricerum

EXHIBIT 9-B, Page 1

02-4680
CARRERE
Sep-92

SUMMARY OF SINGLE-FAMILY DETACHED HOUSING ACTIVITY WITHIN
SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES, NEW ORLEANS, LA
SORTED BY AVERAGE HOME PRICE

MAP KEY	COMMUNITY	AREA	1/ PRODUCT TYPE	ORIENTATION	2/ TOTAL LOTS/ HOMES	3/ TOTAL OFFERED	BEGAN SALES	MO. SELL.	HOMES/ LOTS SOLD	AVG. HOMES LOTS SOLD/ MO.	4/ CUR HOMES LOTS SOLD/ MO.	5/ TOTAL REMAINING LOTS/ HMS.	6/ MO. AVA. INV.	7/ MO. POT. INV.	HOME SIZE RANGE (S.F.)	HOME PRICE RANGE	VALUE RATIO $/SF	AVERAGE HOME PRICE
12	METARIE CLUB GARDENS	East Bank	SFD	IN-TOWN/GOLF	200	200	1939	n/a	200	n/a	n/a	0	n/a	n/a	3,000 - 6,240	$359,000 - $1,250,000	$120 - $200	$550,000
11	FARNHAM PLACE	Old Metarie	SFD	IN-TOWN	70	70	1947	n/a	70	n/a	n/a	0	n/a	n/a	3,600 - 6,000	$410,000 - $800,000	$114 - $133	$518,000
1	ENGLISH TURN	West Bank	SFD	GOLF	700	180	Oct-88	48	123	2.9	2.0	577	20	179	2,459 - 10,425	$224,000 - $1,354,208	$91 - $130	$406,450
10	OAKBRIDGE PARK	Old Metarie	SFD	IN-TOWN	65	65	1927	n/a	65	n/a	n/a	0	n/a	n/a	3,600 - 5,000	$359,900 - $700,000	$100 - $140	$398,000
				Total	1,035	515			458	2.9	2.0	577						
				Weighted Average									20	179			$91 - $200	$485,000
				Percent of Total	14%	8%			8%			39%						
5	EASTOVER	NE New Orleans	SFD	GOLF	682	252	Sep-87	60	134	2.2	1.8	548	54	195	3,000 - 4,000	$250,000 - $350,000	$83 - $88	$275,000
3	LAKEWOOD ESTATES	West Bank	SFD	GOLF VIEWS	76	76	1982	120	76	1.6	n/a	0	0	0	3,000 - 5,950	$218,000 - $650,000	$73 - $109	$275,000
6	BEAU CHENE	Northshore	SFD	LAKE/GOLF	1,495	1,495	1975	210	1,405	5.9	4.0	90	15	0	2,400 - 6,000	$185,000 - $500,000	$77 - $83	$251,000
2	STONEBRIDGE	West Bank	SFD	GOLF	1,008	1,008	1981	138	980	7.4	4.5	28	4	0	2,300 - 4,500	$150,000 - $400,000	$65 - $89	$209,500
9	CHATEAU ESTATES	Kenner	SFD	GOLF	400	400	1975	150	396	2.7	0.5	4	1	0	1,750 - 6,500	$96,000 - $745,000	$55 - $115	$200,000
4	PLANTATION ESTATES	West Bank	SFD	HEAVILY TREED	430	430	Apr-85	90	420	4.8	4.2	10	2	0	2,300 - 4,000	$150,000 - $300,000	$65 - $75	$185,000
				Total	4,091	3,661			3,411	24.6	15.0	680						
				Weighted Average						5.6	3.0		10	17			$65 - $115	$226,500
				Percent of Total	54%	56%			56%			46%						
8	ORMOND COUNTRY CLUB	St. Charles	SFD	GOLF	1,500	1,500	Dec-78	158	1,370	8.7	5.0	130	15	0	1,600 - 8,000	$93,000 - $700,000	$58 - $88	$151,000
7	GREENLEAVES	Northshore	SFD	NON-AMENITY	894	894	Jan-85	86	818	9.5	6.0	76	8	0	1,600 - 3,800	$107,000 - $260,000	$67 - $68	$150,700
				Total	2,394	2,394			2,188	18.2	11.0	206						
				Weighted Average						9.0	5.5		11	0			$58 - $88	$150,900
				Percent of Total	32%	36%			36%			14%						
	TOTAL				7,520	6,570			6,057	45.7	28.0	1,463						
	WEIGHTED AVERAGE									6.8	3.5		11	21				$218,700

1/ SFD-Single-Family Detached; CLS-Cluster Homes; MF-Multifamily attached.
2/ Total number of homes once the development is complete.
3/ Total number of lots and/or speculative homes offered for sale to date to prospective buyers.
4/ Average monthly sales absorption over the most recent twelve month period.
5/ Total remaining lots and units to be sold, including future phases.
6/ Estimated length of time to sell-off existing inventory of lots/units offered, but unsold, based on average sales rate.
7/ Estimated length of time to absorb potential inventory of lots/units planned to be offered (future phases), based on sales rate.

SOURCE: ROBERT CHARLES LESSER & CO.

SUMMARY OF SINGLE-FAMILY DETACHED HOUSING ACTIVITY WITHIN
SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES, NEW ORLEANS, LA
SORTED BY AVERAGE HOME PRICE

MAP KEY	PROJECT NAME	PREMIUM TYPE	8/ LOT PRICE RANGE	AVERAGE LOT PRICE	9/ AVG LOT SIZE (SQ. FT.)	LOT FRONT-AGE	LOT TO HOME RATIO	10/ LOT PREMIUMS	LOT SALES TO WHOM	% SALES TO IND. CON-SUMERS	BUILDER LOT PROG.	NUMBER OF BUILDERS
12	METAIRIE CLUB GARDENS	GOLF VIEWS	$125,650 - $250,000	$165,000	11,250 - 29,600	75-200	30%	n/a - n/a	n/a	n/a	n/a	n/a
11	FARNHAM PLACE	NONE	$150,000 - $175,000	$162,500	10,625 - 12,150	85-90	31%	n/a - n/a	n/a	n/a	n/a	n/a
1	ENGLISH TURN	GOLF	$69,000 - $305,000	$136,745	13,500 - 51,268	100	34%	$40,000 - $110,000	BLDR/IND	79%	YES	4
10	OAKBRIDGE PARK	NONE	$150,000 - $160,000	$150,000	11,280 - 13,440	94-112	38%	n/a - n/a	n/a	n/a	n/a	n/a
		Weighted Average	$117,600 - $240,500	$154,900	11,800 - 30,500	90-100	32%	$40,000 - $110,000		79%		4
5	EASTOVER	GOLF	$45,000 - $71,500	$63,464	7,487 - 21,780	65-110	23%	$4,000 - $15,000	BLDR/IND	75%	NO	8
3	LAKEWOOD ESTATES	GOLF VIEWS	$45,000 - $68,000	$56,500	7,700 - 9,900	70-90	21%	$18,000 - $23,000	BLDR/IND	MOST	NO	n/a
6	BEAU CHENE	LAKE/GOLF	$49,900 - $150,000	$53,400	14,000 - 43,560	100	21%	$21,000 - $90,000	BLDR/IND	66%	NO	10-15
2	STONEBRIDGE	GOLF	$25,000 - $68,750	$46,000	10,000 - 25,000	75-120	22%	$1,000 - $18,850	BLDR/IND	50%	NO	10
9	CHATEAU ESTATES	GOLF	$19,900 - $160,000	$40,000	6,600 - 22,500	60-150	20%	$21,000 - $90,000	BLDR/IND	n/a	n/a	n/a
4	PLANTATION ESTATES	HEAVILY TREED	$33,000 - $38,000	$37,000	9,600 - 17,500	75-90	20%	$2,000 - $5,000	BLDR/IND	50%	NO	7
		Weighted Average	$36,900 - $109,100	$48,200	11,100 - 31,000	75-120	21%	$12,200 - $54,653		60%		10
8	ORMOND COUNTRY CLUB	GOLF	$20,000 - $76,000	$34,200	7,700 - 43,560	70-120	23%	$32,500 - $48,500	BLDR/IND	15%	NO	10-15
7	GREENLEAVES	LAKE	$21,400 - $55,000	$30,860	9,600 - 28,000	80-130	20%	$15,000 - $15,000	BLDRS	n/a	YES	10+
		Weighted Average	$20,500 - $68,100	$33,000	8,400 - 37,700	75-125	22%	$26,000 - $36,000		15%		10-15
		WEIGHTED AVERAGE	$37,100 - $104,300	$50,700	10,200 - 33,400	80-120	23%	$16,200 - $43,800		64%		10

8/ Range in lot prices offered, included premiums.
9/ Range of lot sizes in square feet.
10/ Premiums for view lots charged above base lot prices.
SOURCE: ROBERT CHARLES LESSER & CO.

pricorum

EXHIBIT 9-B, Page 3

SUMMARY OF SINGLE-FAMILY DETACHED HOUSING ACTIVITY WITHIN
SELECTED ACTIVE AND EXISTING RESIDENTIAL COMMUNITIES, NEW ORLEANS, LA
SORTED BY AVERAGE HOME PRICE

02-4680
CARRERE
Sep-92

MAP KEY	PROJECT NAME	11/ BUYER PROFILE SING./ COUP	FAM	E.N.	RET.	12/ COMMUNITY AMENITIES	ANNUAL MANDATORY HOME-OWNERS FEE	HOLES OF GOLF	COURSE DESIGNER	GOLF/ COUNTRY CLUB	INITIATION FEE	MONTHLY DUES	ANNUAL ROUNDS OF GOLF	CURRENT MEMBERS	GOLF MEMBERS	% OF GOLF MEMBERS THAT ARE RESIDENTS	CLUB-HOUSE SIZE (SQ. FT.)
12	METARIE CLUB GARDENS	Primarily families, ages mid-30's to				Near private schools	n/a	18	LOCAL	PRIVATE	$16,000	$200	31,000	1,200	480	n/a	45,000
11	FARNHAM PLACE	0% /	75% /	25% /	0%	Near private schools	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1	ENGLISH TURN	8% /	80% /	10% /	2%	G,LK,P,T,CC,SEC	$1,260	18	JACK NICKLAUS	PRIVATE	$16,500	$210	18,000	450	250	3 are golf	43,000
10	OAKBRIDGE PARK	5% /	70% /	20% /	5%	Near private schools	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total							36					49,000	1,650	730		
	Weighted Average	3% /	76% /	20% /	1%		$1,260	18			$16,250	$205	25,000	825	365		44,000
5	EASTOVER	10% /	60% /	20% /	10%	P,T,G,CC,SEC	$720	18	JOE LEE	SEMI-	$1,500	$125	40,000	450	450	26%	15,000
3	LAKEWOOD ESTATES	10% /	70% /	20% /	0%	SECURITY (Adjacent to golf)	$670	18	ROBERT HARRIS	PRIVATE	$5,000	$165	20,000	300	270	n/a	25,000
6	BEAU CHENE	10% /	66% /	20% /	10%	P,T,G,CC,SEC,LK	$849	36	JOE LEE	PRIVATE	$5,000	$120	55,000	1,200	850	75%	30,000
2	STONEBRIDGE	15% /	60% /	20% /	5%	G,CC,T,P	$216	27	LOCAL	PRIVATE	$500	$90	35,000	560	420	20%	33,000
9	CHATEAU ESTATES	15% /	75% /	5% /	5%	G,CC,P,T	n/a	18	IVERETT ALLEMA	PRIVATE	$2,500	$125	40,000	700	560	25%	20,000
4	PLANTATION ESTATES	15% /	70% /	10% /	5%	NONE	$60	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total							180					190,000	3,210	2,550		
	Weighted Average	13% /	66% /	17% /	7%		$483	26			$2,857	$119	29,000 per 18	642	510	37%	26,000
8	ORMOND COUNTRY CLUB	20% /	65% /	10% /	5%	P,T,G,CC,PK,NP	NONE	18	LOCAL	PRIVATE	$1,000	$106	40,000	500	340	80%	20,000
7	GREENLEAVES	23% /	63% /	13% /	1%	JOGGING TRAILS	$288	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Total							18					40,000	500	340		
	Weighted Average	21% /	64% /	11% /	4%		$288	18			$1,000	$106	40,000	500	340	80%	20,000
	WEIGHTED AVERAGE	15% /	66% /	15% /	5%		$553	234 21			$5,333	$143	279,000 32,800	5,360	3,620 68%	45%	28,900

11/ SING./COUP.-Singles and couples; FAM-Families with children; E.N.-Empty Nesters; RET.-Retirees.
12/ CC-Country Club; G-Golf; T-Tennis; P-Pool; LK-Lake; TR-Trails; PK-Park; NP-Nature Preserve; SEC-Security
SOURCE: ROBERT CHARLES LESSER & CO.

dem-det

EXHIBIT 10
DEMAND FOR NEW HOUSING PRICED ABOVE $140,000, IN THE WEST BANK COMPETITIVE MARKET AREA

02-4680
CARERRE
Nov-92

	Lot Price:	$28,000 $39,000	$34,000 $48,000	$42,000 $58,000	$50,000 $70,000	$64,000 $77,000	
	Lot to home ratio:	20% 23%	20% 23%	20% 23%	20% 24%	22% 24%	
	Home Price:	$140,000	$170,000	$210,000	$250,000	$290,000	
	i = 8.5%	$170,000	$210,000	$250,000	$290,000	$320,000	
	Income: /1	$40,000 $49,999	$50,000 $62,499	$62,500 $74,999	$75,000 $85,000	$85,000 $95,000	
SOURCES OF DEMAND							Total
New Household Growth, 1992-1996							
Total Annual New Households,							
West Bank CMA /2		674	674	674	674	674	
x Income Qualified /3		11%	7%	7%	4%	2%	
= Income Qualified		76	47	44	27	13	
x Owner Propensity /3		75%	78%	82%	85%	90%	
= Qualified New Households		57	37	36	23	12	
x Active Market Factor /4		26%	27%	27%	29%	29%	
Subtotal, from New Household Growth		15	10	10	7	4	45
Existing Owner Household Annual Turnover							
Total Owner Households,							
West Bank CMA, 1992 /2		113,994	113,994	113,994	113,994	113,994	
x Income Qualified /3		11%	7%	7%	5%	3%	
= Income Qualified		12,881	7,980	7,524	5,700	3,420	
x Annual Turnover Rate /3		8%	8%	8%	8%	7%	
= Qualified Owners in Turnover		1,031	638	602	456	239	
x Active Market Factor /4		6%	6%	6%	6%	7%	
Subtotal, from Owner Turnover		59	38	36	29	16	178
Existing Renter Household Annual Turnover							
Total Renter Households,							
West Bank CMA, 1992 /2		56,886	56,866	56,886	56,886	56,886	
x Income Qualified /3		2.8%	1.5%	1.2%	0.8%	0.3%	
= Income Qualified		1,607	876	676	427	171	
x Annual Turnover Rate /3		35%	35%	35%	35%	35%	
= Qualified Renters in Turnover		562	307	237	149	60	
x Active Market Factor /4		5%	6%	6%	6%	6%	
Subtotal, from Renter Turnover		28	18	14	9	4	73
TOTAL ESTIMATED ANNUAL POTENTIAL DEMAND:		102	67	60	44	23	296
		34.4%	*22.5%*	*20.3%*	*15.0%*	*7.7%*	*100.0%*
ESTELLE PLANTATION CAPTURE: 5/		25%	25%	23%	23%	0%	22%
		25	17	14	10	0	66
		2.1	1.4	1.2	0.8	0.0	5.5

NOTES:
1/ Affordability based on 8.5% interest rate, varying down payments increasing by income, and 30 year term.
2/ West Bank CMA demographics.
3/ US Census, and Urban Decision Systems demographic analysis, assuming current demographics for the CMA.
4/ RCLCo. estimate from alternatives in the market, market segmentation, and market activity.
5/ Capture for Subject Property assumes broad price range and product inventory, as well as competitive alternatives by price range.

SOURCE: Robert Charles Lesser & Co.

lots

02-4680
CARRIERE
Nov-92

EXHIBIT 11
ESTELLE PLANTATION
RECOMMENDED SINGLE FAMILY HOME PRODUCT
AND ACREAGE DISTRIBUTION ESTIMATES

Market Quoted Lot Price:	$28,000	$34,000	$42,000	$50,000	
	$39,000	$48,000	$58,000	$70,000	
Market Lot to Home Ratio:	20%	20%	20%	20%	
	23%	23%	23%	24%	
Lot Premium:	$11,000	$14,000	$16,000	$20,000	
Lot Premium %:	39%	41%	38%	40%	
Builder Discounted Lot Price:	$25,000	$31,000	$38,000	$45,000	
	$36,000	$44,000	$53,000	$64,000	
Builder Lot to Home Ratio:	18%	18%	18%	18%	
	21%	21%	21%	22%	
Home Price:	$140,000	$170,000	$210,000	$250,000	
i = 8.5%	$170,000	$210,000	$250,000	$290,000	
Income: /1	$40,000	$50,000	$62,500	$75,000	
	$49,999	$62,499	$74,999	$85,000	
Annual Sales		25	17	14	10	
Density		3.3	2.5	2.0	1.6	
Average Lot Sizes		10,000	13,000	16,000	20,000	
Orientation		Clubhouse	Golf/Non-Golf	Golf/Non-Golf	Primarily Golf	
Total Acres	500					
Golf Acres	175					
Swim/Tennis	5					
Open/Roads 15%	49					
Est. Developable	271					
% Acres Allocation (Total)		15%	13%	14%	13%	54%
% Acres Allocation (Dev.)		27%	24%	26%	23%	100%
Acres Distribution		73	65	70	63	271
Total Units		238	163	143	103	648
Pecentage Total Units		37%	25%	22%	16%	100%
Years of Absorption		10	10	10	10	

SOURCE: ROBERT CHARLES LESSER & CO.

ESTELLE PLANTATION PARTNERSHIP
111 Veterans Boulevard
Suite 1150
Metairie, Louisiana
70005

(504) 832-4161

December 8, 1992

CONFIDENTIAL

Mr. Thomas A. Sands
Adams and Reese
4500 One Shell Square
New Orleans, LA 70139

RE: Market Analysis and
Development Strategy
367 acres adjecent to
Jefferson Parish Public Golf Course

Dear Tom:

Enclosed please find a copy of the above captioned.

Yours very truly,

Thomas A. "Tac" Carrere,
Managing General Partner

TAC/srw

Enclosure

APPENDIX C

SUBPOPULATION STUDY OF WEST BANK RESIDENTS

Hartman Engineering, Inc.

Consulting Engineers

April 25, 1995

Mr. Robert Bosenberg
U.S. Army Corps of Engineers
NOD-PD-RS
P. O. Box 62067
New Orleans, LA 70160-0267

RE: Estelle Plantation Partnership (SE 238) EIS
Subpopulation Study

Dear Mr. Bosenberg:

Enclosed please find the final report summarizing the results of the subpopulation study. The study supports the assumption that their is a population of West Bank residents that have an allegiance to the West Bank and are not interested in moving to the Northshore. We believe the results of this study should effectively remove the Northshore from the search for alternative sites.

Please review the enclosed report at your convenience and notify Hartman Engineering, Inc. if you are in concurrence with our assessment. If you have any questions, please contact our office.

Sincerely,

HARTMAN ENGINEERING, INC.

Kerry Higgins

Attachment

cc: Thomas Carrere w/o attch.
Rodney Gannuch
General Thomas Sands

527 W. ESPLANADE, SUITE 200 • KENNER, LA 70065 • (504) 466-5667

Hartman Engineering, Inc.

Consulting Engineers

April 25, 1995

Mr. Thomas Carrere
Estelle Plantation Partnership
111 Veterans Blvd., Suite 1600
Metairie, LA 70005-3039

Subject: Estelle Plantation EIS
Subpopulation Study

Dear Mr. Carrere:

Hartman Engineering, Inc. (HEI) performed a subpopulation study to provide support for the alternatives analysis and the need for housing for the Estelle Plantation Partnership (EPP) Environmental Impact Statement (EIS). The purpose of the study was to define a subpopulation of West Bank residents that were not interested in moving to the Northshore. This subpopulation, if defined, could be utilized to justify removing the Northshore from the search for alternative sites. In addition, the subpopulation study could provide additional support for the housing demand associated with EPP's proposed golf course and housing development.

The subpopulation study consisted of a telephone survey of West Bank residents currently living in communities with golf and/or other country club amenities and/or those living in neighborhoods where the average house cost is in excess of $100,000.00. HEI also searched historical literature and census information for trends in residential development on the West Bank. This information was to further establish the tendency of West Bank residents to remain on the West Bank. The following letter report describes the results of the subpopulation study.

TELEPHONE SURVEY

A telephone survey of residents living on the West Bank of Jefferson Parish was conducted over a two week period. The residents were surveyed from Timberlane Estates, Lake Timberlane Estates, Bent Tree, Crestwood, Barataria Estates, Plantation Estates, and Stonebridge subdivisions. The streets within the subdivisions utilized are listed in Attachment 1. Each surveyed household was asked the following four questions:

1. Are you a resident of the West Bank of Jefferson Parish?

2. How long have you resided on the West Bank of Jefferson Parish?

3. Do you have any relatives that live on the West Bank?

4. Would you consider moving to the Northshore?

A fifth question was asked of all residents answering "yes"to question No. 4, that question was as follows:

5. If housing in the range of $100,000 to $200,000 were available on the West Bank with amenities such as large lot sizes, secluded location, and readily available access to golfing, fishing, boating, Jean Lafitte National Park and other recreational resources, would you still consider moving to the Northshore?

The purpose of this question was to define that portion of the West Bank population surveyed that would not move to the Northshore if a housing development with amenities such as that proposed by EPP were available. This question will not definitively establish that these people will move to Estelle, only that they would no longer consider moving to the Northshore.

Of the households phoned, 400 responded to the survey. The survey results are presented in Exhibit 1. Survey results indicate that, of the population surveyed, the residents have lived on the West Bank of Jefferson Parish for an average of 22.6 years. 71% of the same population have relatives living on the West Bank. Only 32% of the households surveyed were interested in moving to the Northshore and of that 32%, 25% would stay on the West Bank if comparable housing were available. Overall, 73% of the West Bank households indicated they prefer to live on the West Bank or would remain on the West Bank if desired housing were available. This indicates that, for the majority of West Bank residents who will purchase housing in the price range offered by EPP, the Northshore will not supply their housing needs.

Exhibit 2 consists of tables formulated from data from the Robert Charles Lessor and Company, October 17, 1994 housing study. The tables indicate the number of West Bank CMA households in the appropriate affordability range for EPP. Data exists for 1990 and 1994; the data for 1999 is anticipated due to current development trends. In 1994, approximately 23,815 households maintained an annual income ranging from $35,000 to $99,000. These are the existing households the EPP development will attract. The subpopulation survey represents approximately 2.5% of the total number of households (presented in the table) within the income range for EPP. The number of households within the $35,000 to $99,000 income range is anticipated to increase to 29,094 in 1999. The subpopulation study indicates that at a minium, "move up" and rental buyers for the EPP project would be drawn from 17,384 households in 1994 and approximately 21,238 in 1999.

According to the housing study, the total estimated potential demand for housing within the income range defined for EPP for the period of 1994 to 1999 is 350 new units per year (Exhibit 3). Of this demand, 185 households are anticipated to be due to "move up" buyers or renters purchasing their first home. The housing study indicated that Estelle will capture as much as 20% of the West Bank CMA's need for new housing or 20% of the 350 total and 20% of the 185 "remove up" and rental buyers. The subpopulation study provides support for the premise that the 185 housing unit annual demand from "move up" and rental buyers may be greater and EPP's capture of this market may be greater than anticipated due to the majority of potential buyers desiring to remain on the West Bank.

HISTORICAL LITERATURE AND CENSUS INFORMATION

HEI reviewed historical census data and attempted to locate historical literature related to the West Bank and its development to support the supposition that West Bank residents have an "allegiance" to the West Bank. Local historians were contacted and a literature review was conducted at the University of New Orleans Library to locate historical data. Through this effort it was determined that historical literature on population growth and movement on the West Bank of Jefferson Parish was largely unavailable, with the exception of census data.

The 1990 Census Review of Jefferson Parish separates the west bank into two separate regions. The first region is the West Bank of Jefferson, and the second is the Barataria region. According to the Regional Planning Commission of New Orleans, the total Jefferson Parish Westbank population is 187,604 persons, 36% of the population of Jefferson Parish. It consists of 91,158 males and 96,445 females. Most of the population range from 25 to 44 years old (34%); 31% of the population is under 18 years; and only 7.5% are over 65 years. The West Bank is comprised of twelve communities, which include Avondale, Barataria, Bridge City, Estelle, Gretna, Harvey, Jean Lafitte, Marrero, Terrytown, Timberlane, Waggaman, and Westwego. The population change for the West Bank Jefferson region was (-4,060), while the total population change for Jefferson Parish was (-6,286) between the 1980 and 1990 Census. Between the years of 1980 and 1990, the following communities experienced a net loss of population: Avondale, Gretna, Harvey, Westwego. Of these four communities, Harvey and Avondale gained approximately 14% and 4% additional housing units, respectively, during this same period time.

Seven of the eight remaining communities gained in both population and housing during the period between 1980 and 1990. Although Terrytown and Marrero experienced populations increases of only 1%, other communities such as Estelle and Jean Lafitte experienced population growths of 11% and 57%, respectively. Barataria, Timberlane and Waggaman had population increases of 3% to 9%. All of these communities experienced high levels of new housing starts. The average housing increase for these areas during the last decade was 32%, ranging from a 13% increase in Marrero to 88% for Jean Lafitte.

Bridge City, the last remaining West Bank community can not be analyzed for the 1980 to 1990 time period because was not census designated place in 1988.

This census data reveals that, although the West Bank of Jefferson Parish experienced a decrease in population growth for the 1980 to 1990 time frame, many communities on the West Bank had both population and housing increases. This is amplified by a total West Bank population increase of 1.7% between 1990 and 1994, and future projected increases. The majority of the communities gaining in population and housing are located in the vicinity of the EPP property. The EPP property is located between the communities of Estelle and Barataria/Jean Lafitte. The community of Jean Lafitte gained more individuals and housing than any other community on the West Bank. Both Estelle and Barataria gained between 20% and 30% in housing starts. These statistics indicate that successful development of the EPP site can be achieved and demand for housing in this area is high.

Overall, the data obtained from the subpopulation survey as well as the census data support the marketability of Estelle Plantation. The subpopulation study established that, 73% of households surveyed within the income range of the planned Estelle development, prefer to live on West Bank or would remain on the West Bank if desired housing were available. Thus, establishing that the Northshore housing market does not directly appeal to many residents currently living on the West Bank of Jefferson Parish. The census data indicates that communities in the vicinity of the planned EPP development are experiencing higher growth rates than the whole of Jefferson Parish. Based on this data, the Northshore housing market can not fulfill West Bank residents need or demand for housing. The data supports removing the Northshore as a location for viable alternative sites. Pending COE agreement, the Northshore will be eliminated from the search for alternative sites.

HEI appreciates this opportunity to be of assistance to EPP.

Sincerely,

HARTMAN ENGINEERING, INC.

Adam Faschan, Ph.D., P. E.

AF/kh

Attachment 1

Bent Tree and Crestwood Subdivisions

Twig Drive
Green Briar Drive
Bent Tree Blvd.
Deutsch Road
Sprig Drive
Leaf Lane
Bark Ave
Thornhedge Drive
Sagewood Drive
Foiage Drive
Long Branch Drive
Bent Tree Drive
Crestwood Road
Fawnwood Road

Barataria Estates Subdivision

Cedar Lawn Drive
Cypress Lawn Drive
Willow Lawn Street
Elm Lawn Drive
Magnolia Lawn Drive (street)
Alcid

Timberlane Estates Subdivision

Hampton Drive
Stall Drive
S and W Friendship Drive
Louise Street
Brighton Place
Bradford Place
Sutherland Place
Jupiter Street
Pembroke Lane
Snowbird Drive
Breckenridge Drive
Killington Drive
Sugarloaf Drive
Aspen Drive

Southern Oaks Drive
Bayou Oaks Drive
W and E Bamboo Drive
Red Cypress Drive
Devon Road
Newbury Court
Abbey Way
Timberlane Way
Carriage Lane
Cottage Lane
Chimney Lane
Appleby Lane
Le Brun Drive
Karno Place
Orbit Court
N and S Von Braun Court
Vulcan Street
Colombo Drive
Saturn Street
Telstar Street
Gemini Street
Centaur Street
Mars Street
Apollo Ave.
Matador Street
Missle Street
Titan Street

Lake Timberlane Estates Subdivision

Lake Arrowhead Drive
Lake Des Allemands Drive
Lake Catherine Drive
Lake Winnipeg Drive
Lake Arthur Drive
Lake Palourde Drive
Lake Bonaparte Drive
Lake Michigan Drive
Lake Salvador Drive
Lake Sabine Drive
Lake Huron Drive
Lake Providence Drive
Lake Orion Drive
Lake Ontario Drive
Lake Erie Drive
Lake Placid Drive

Lake Tahoe Drive
Lake Maurepas Drive
Lake Superior Drive
Lake Verret Drive
Lake Borgne Drive

Plantation Estates Subdivision

Darby Court
Asphodel Drive
Gainswood Drive E and W
Belle Grove
Longwood Court
Rosedown Court
Devereaux Drive
Rienzi Drive
Oak Alley Blvd.
Seven Oaks Road
Melrose Road
Briarfield Drive
Madewood Drive
Nottoway Drive
Shadows Court
Tara Court
Parlange Drive
Oakley Drive
Ben Michael Drive
E and S Ridgelane Street

Stonebridge Subdivision

Woodbridge Drive
Stonebridge Drive
Lake Frances Drive
Lake Louise Drive
Lake Timberlane Drive
Lake Michel Court
Lake Aspen South/North/East Drive
Lake Aspen Drive
Lake Charles Drive
Lake Lynn Drive
Lake Kristin Drive

EXHIBIT 1
RESULTS OF SUBPOPULATION SURVEY; 400 RESPONSES OBTAINED

QUESTION	RESPONSE		
	YES	NO	UNKNOWN
Are you a resident of the West Bank of Jefferson Parish?	399	1	
Do you have relatives that live on the West Bank?	284	114	2
Would you consider moving to the Northshore?	129	261	10
If housing in the range of $100,000 to $200,000 were available on the West Bank with amenities such as large lot sizes, secluded location, and readily available access to golfing, fishing, boating, Jean Lafitte National Park and other recreational resources, would you still consider moving to the Northshore?	94	33	2

RESULTS OF SUBPOPULATION SURVEY

QUESTION	RESPONSE (in years)				
	0 – 5	6 – 10	11 – 20	> 20	Unknown
How long have you resided on the West Bank of Jefferson Parish?	59	65	93	179	4

EXHIBIT 2
JEFFERSON PARISH WEST BANK CMA
HOUSEHOLD INCOME DISTRIBUTION

INCOME RANGES	TOTAL HOUSEHOLDS	HOUSEHOLDS THAT PREFER WB HOUSING
1990		
$35,000 to $49,999	9,696	7,078
$50,000 to $74,999	6,966	5,085
$75,000 to $99,999	1,658	1,210
TOTAL	18,320	13,373
1994		
$35,000 to $49,999	10,544	7,697
$50,000 to $74,999	10,143	7,404
$75,000 to $99,999	3,128	2,283
TOTAL	23,815	17,384
1999		
$35,000 to $49,999	11,475	8,377
$50,000 to $74,999	12,199	8,905
$75,000 to $99,999	5,420	3,957
TOTAL	29,094	21,239

SOURCE: Robert Charles Lesser & Company

APPENDIX D

LETTER FROM COUNCILMAN JAMES E. LAWSON, JR.

JAMES E. LAWSON, JR.
VICE-CHAIRMAN
COUNCILMANIC DISTRICT 2

JEFFERSON PARISH
LOUISIANA

OFFICE OF THE COUNCIL

POST OFFICE BOX 9
GRETNA, LOUISIANA 70054
504-364-2611
FAX: 504-364-3417

January 30, 1995

Mr. Ronald J. Ventola, Chief
Regulatory Functions Branch
Operations and Readiness Division
Eastern Evaluation Section
Department of the Army
New Orleans District - Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160-0267

RE: Estelle Plantation
SE (Jefferson Parish Wetlands) 238

Dear Mr. Ventola

Jefferson Parish has indicated in previous correspondences that it will operate and maintain the golf course to be constructed pursuant to the referenced permit. The Parish previously agreed to accept the property as a donation to the Parish. Accordingly, we request that the permit application be modified to indicate that Jefferson is a co-applicant.

Sincerely,

James E. Lawson, Jr.
Vice-Chairman
Councilman, District 2

JELjr:rgb

On motion of Mr. Evans, seconded by Mr. Ward, the following resolution was offered:

RESOLUTION NO. 73599

A resolution authorizing Jefferson Parish to accept the donation of approximately 175 acres of land in Sections 82, 85, 99 and 7 in Township 14 South, Range 24 East, Ames Farms/Estelle Plantation Subdivision, from the Estelle Plantation Partnership, to be developed by the Parish as a public golf course.

BE IT RESOLVED by the Jefferson Parish Council of Jefferson Parish, Louisiana, acting as governing authority of said Parish:

SECTION 1. That the acceptance by Jefferson Parish of a donation of approximately 175 acres of land in Sections 82, 85, 99 and 7 in Township 14 South, Range 24 East, Ames Farms/Estelle Plantation Subdivision, from the Estelle Plantation Partnership, to be developed by the Parish as a public golf course is hereby authorized.

SECTION 2. That the Chairman, or in his absence, the Vice-Chairman, is hereby authorized to execute all documents necessary to give full force and effect to this resolution.

The foregoing resolution having been submitted to a vote, the vote thereon was as follows:

YEAS: 6 NAYS: None ABSENT: (1) Lawson

The resolution was declared to be adopted on this the 20th day of January, 1993.

AMG/na-October 14, 1992

THE FOREGOING IS CERTIFIED
TO BE A TRUE & CORRECT COPY

Terrie T. Rodrigue

TERRIE T. RODRIGUE
PARISH CLERK
JEFFERSON PARISH COUNCIL

APPENDIX E

LETTERS FROM THE LOUISIANA DEPARTMENT OF CULTURE, RECREATION AND TOURISM

Edwin W. Edwards
Governor

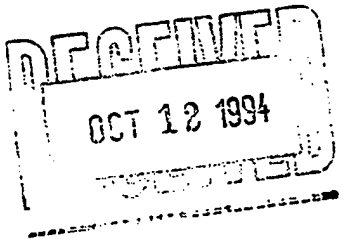
Melinda Schwegmann
Lieutenant Governor
and Commissioner

State of Louisiana
Department of Culture, Recreation and Tourism
OFFICE OF CULTURAL DEVELOPMENT

Mark H. Hilzim
Secretary

Gerri Hobdy
Assistant Secretary

October 11, 1994



Ms. Barbara D. Bossier
Hartman Engineering, Inc.
527 West Esplanade
Suite 300
Kenner, Louisiana 70065

Re: Estelle Plantation
HEI Project No. 071-04-ESTE
Jefferson Parish, Louisiana

Dear Ms. Bossier:

Reference is made to your letter dated September 15, 1994, concerning the above. A review of our files indicates that there are no sites or properties either listed on or which have been determined eligible for listing on the National Register of Historic Places in the proposed project area. In addition, there are no other known cultural resources in this area. As we anticipate no impact to significant cultural resources, we have no objections to the proposed project. Should any archaeological material be uncovered during ground altering activities, however, we request that this office be notified immediately.

If we may be of further assistance, do not hesitate to contact my staff in the Divisions of Archaeology and Historic Preservation.

Sincerely,

Gerri Hobdy
State Historic Preservation Officer

GH:MM:s

Thomas H. Eubanks, Ph.D., Director
Division of Archaeology
P. O. Box 44247 (1051 N. Third Street)
Baton Rouge, LA 70804
(504) 342-8170
Fax: (504) 342-8173
"An Equal Opportunity Employer"

Edwin W. Edwards
Governor

Melinda Schwegmann
Lieutenant Governor
and Commissioner

State of Louisiana
Department of Culture, Recreation and Tourism
OFFICE OF CULTURAL DEVELOPMENT

Mark H. Hilzim
Secretary

Gerri Hobdy
Assistant Secretary

June 1, 1995

Mr. Kerry Higgins
Hartman Engineering, Inc.
527 W. Esplanade, Suite 300
Kenner, Louisiana 70065

Re: Alternative Sites Research Information
Estelle Plantation Partnership
Jefferson & St. Charles Parish, Louisiana

Dear Mr. Higgins:

Thank you for your letter dated May 15, 1995 concerning the above referenced subject. Please be advised that Destrehan Plantation, located in St. Charles Parish and within the boundaries of Alternative #5 for the referenced development, is listed on the National Register of Historic Places (see enclosed map). All other numbers on this map indicate a structure which is fifty years old or older.

In addition to the above, there is a recorded archaeological site, 16JE73, located within the boundaries of Alternative #3 (see enclosed map and copy of site record form). According to the information currently on file, the site has apparently been impacted by highway construction and may be destroyed. Only additional field investigations can confirm this, however.

If we can be of further assistance, please do not hesitate to contact us.

Sincerely,

Gerri Hobdy
State Historic Preservation Officer

GH/PB/s

Enclosures: as stated

"An Equal Opportunity Employer"
Jonathan Fricker, Director
Division of Historic Preservation
P. O. Box 44247 (1051 N. Third Street)
Baton Rouge, LA 70804
(504) 342-8160
Fax: (504) 342-8173

RECEIVED
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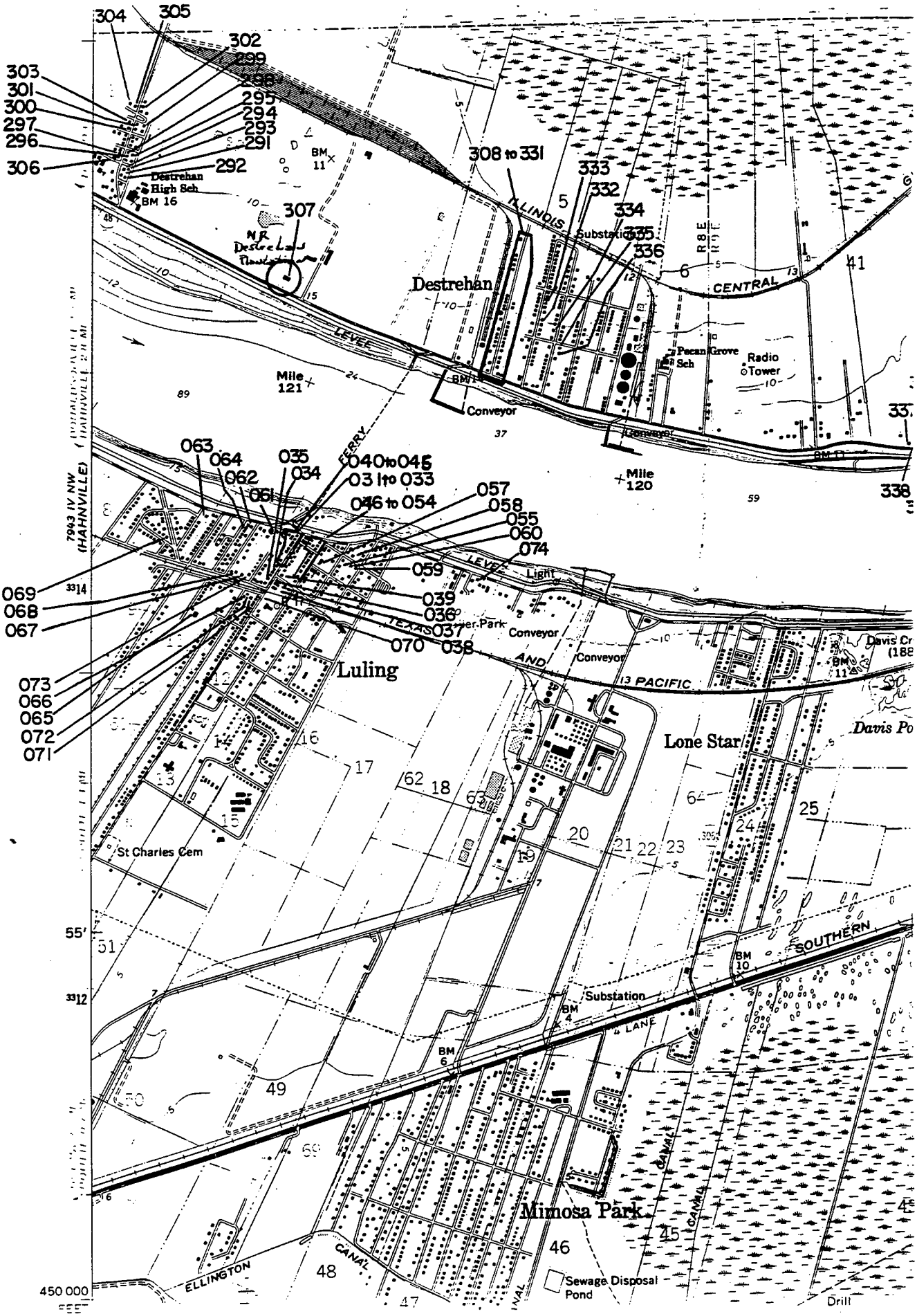
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BM 11
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Plant
ILLINOIS
Substation
CENTRAL
R8E
R9E
Destrehan
LEVEE
Pecan Grove
Sch
Radio
Tower
Mile
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Conveyor
Conveyor
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031 to 033
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TEXAS
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SOUTHERN
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BM 4
BM 6
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ELLINGTON
CANAL
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Pond
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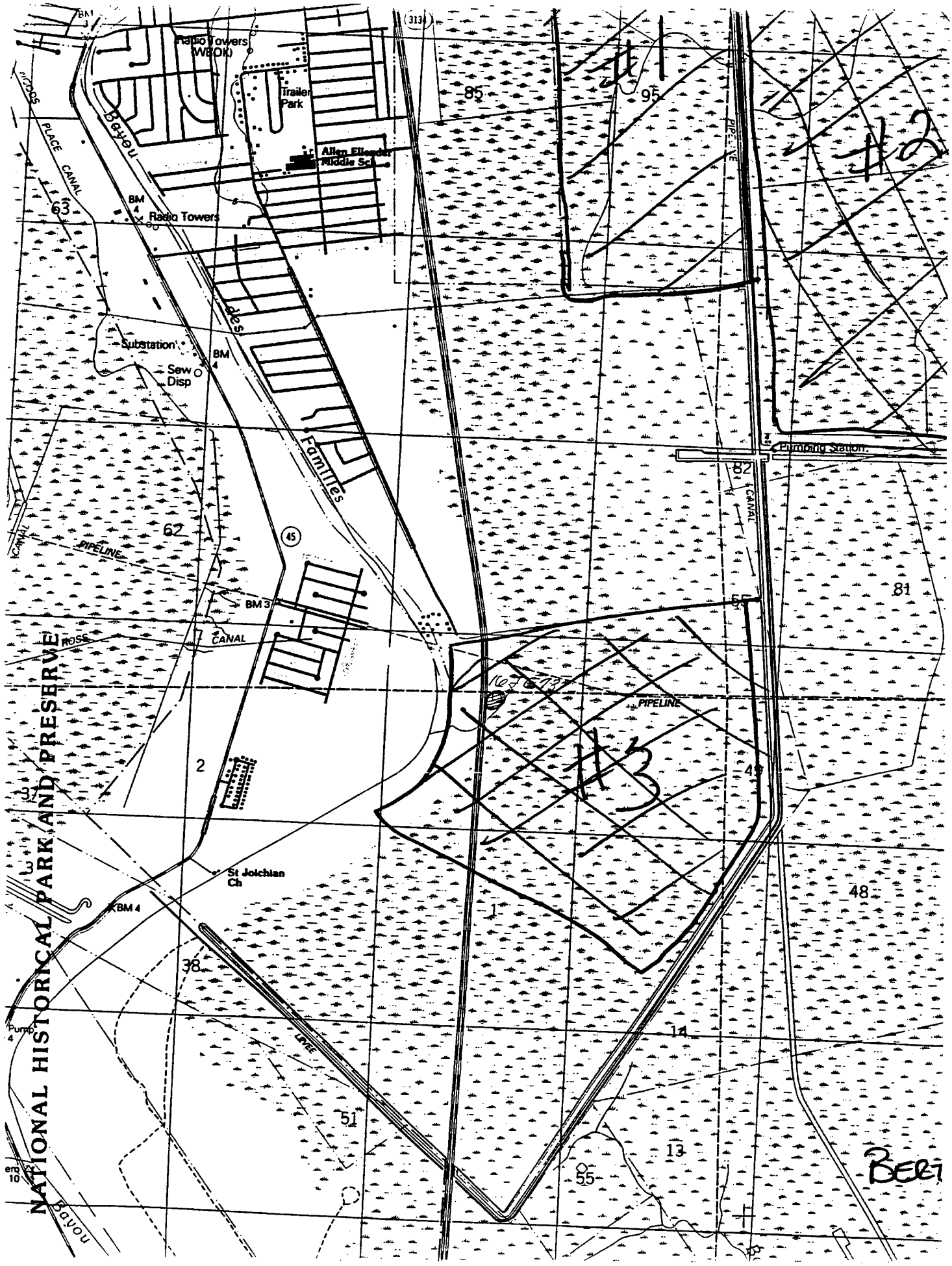
(HAHNVILLE)



Radio Towers (WBOK)
Trailer Park
Allen Ellender Middle Sch
Bayou
PLACE CANAL
BM 4
Radio Towers
Substation
Sew Disp
des
Familles
PIPELINE
CANAL
BM 3
ROSS
CANAL
St Joichian Ch
BM 4
LIVEE
Pumping Station
PIPELINE
CANAL
PIPELINE
Bayou
NATIONAL HISTORICAL PARK AND PRESERVE
#1
#2
#3
BERT

SITE RECORD UPDATE FORM

SITE NAME: No name

STATE SURVEY NO.: 16 JE 73

QUAD: Bertrandville, La., 7.5 min. 33-Fd

UTM COORDINATES: N $^{33}01^{660}$, E $^{7}80^{400}$

TOWNSHIP, RANGE, SECTION: irreg. Section 1, T15S, R23E.

SITE DESCRIPTION, CONDITION, AND PRESENT AND FUTURE IMPACTS:

This small shell midden was impacted by the construction of the Lafitte - Larose highway. Its present condition is unknown, but the site was probably destroyed.

SURVEY METHODS AND DESCRIPTION OF MATERIALS COLLECTED:

Site not located; presumed destroyed.

RECOMMENDATIONS:

None. Site is apparently destroyed.

REMARKS:

Due to the vagueness of the original report, it is unclear if this is a disturbed in situ midden or only material from a spoil dump. It lies within the West Bank impact corridor zone.

RECORDED BY: R. Christopher Goodwin & Associates, Inc.

DATE: July, 1984

STATE OF LOUISIANA

SITE RECORD FORM

Site Name None State Survey No. 16JE73

Other Site Designations None

Instructions for Reaching Site

Parish Jefferson

USGS Quad: (name, date, series)

N central ½ of the N central ½ of the of Section 1 Township 15S Range 23E

UTM Coordinates: Zone Easting Northing

Geographical Coordinates: Latitude 29° 48' 57" N Longitude 90° 05' 50" W

PHYSICAL SETTING

Land Form In western spoil deposit of Larose-Lafitte Highway Geologic Processes

Elevation

Slope Site Position with Respect to Terrain

Nearest Water Flooding

Soil Characteristics

Floral Communities

Faunal Communities

Other Potential Resources

Nearest Known Site

SITE DESCRIPTION

Site Size small shell midden Plan

Orientation Stratigraphy

Artifact Density Artifact Distribution Scattered, dredged up during construction Cultural Features

Cultural Affiliation

Presumed Function Presumed small camping site

COLLECTIONS

Survey Method Pedestrian survey

Assessment of Collecting Conditions

Description of Material Carved bone, Baytown plain pottery, no shell

CONDITIONS

Present Use Erosion or Disturbance

Probable Future Destruction Subject to Primary Impact from highway construction

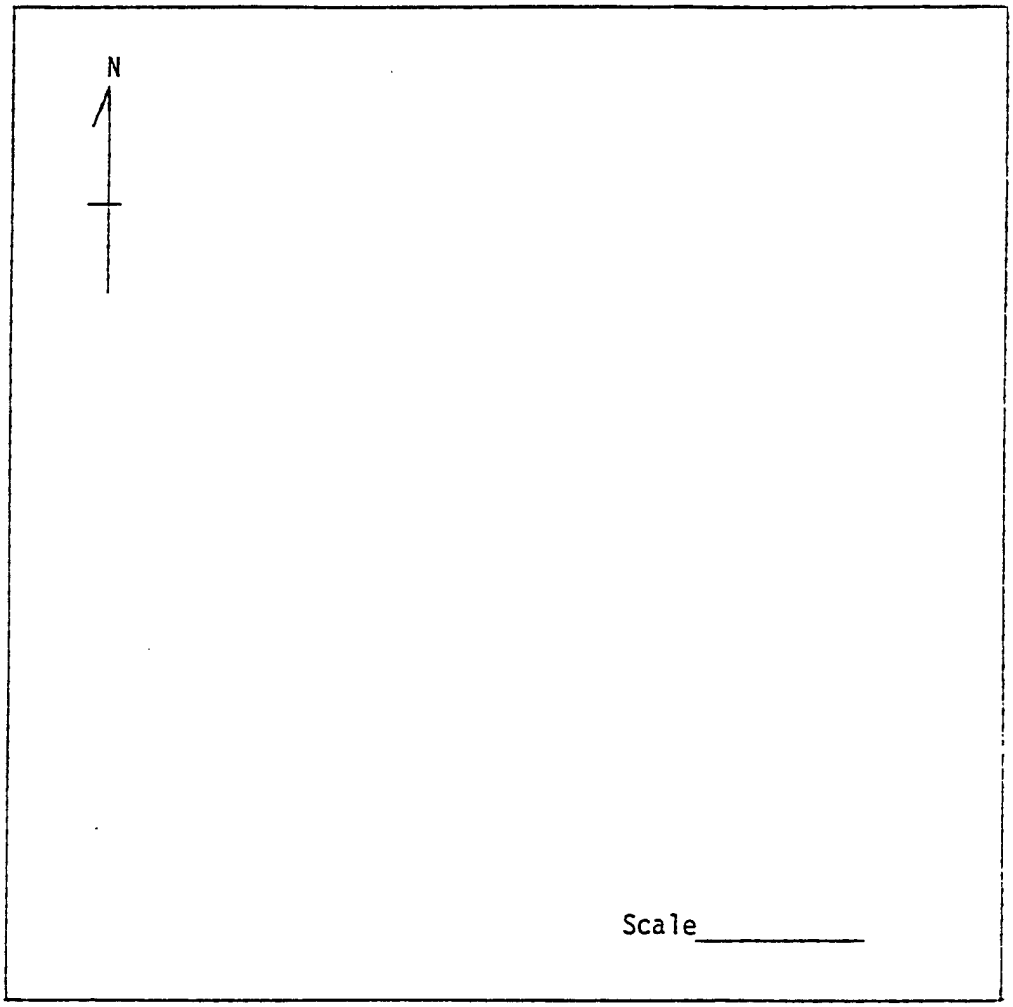
SITE EVALUATION

Research Potential _____

State or National Register Eligibility Does not appear to fulfill criteria

Recommendations _____

SKETCH MAP OF SITE AREA



RECORDS

Owner and Address _____

Tenant and Address _____ Burden

Informants UNO students, reported by Weinstein and ~~Beurden~~ from CEI

Previous Investigations _____

Previous Collections and Availability _____

References _____

Photographs and Maps _____

Remarks _____

Recorded By A. Prieto Date 2 February 1981

STATE OF LOUISIANA
SITE RECORD FORM

Site Name: State Survey No: 16JE73
Other Site Designation: Parish: Jefferson
Instructions for Reaching Site:

USGS Quad (Name, date, series): New Orleans (1967) 15'
Quad No: 33-P N quarter of the N quarter of Section 1 Township 15S Range: 23E
UTM Coordinates: Zone: 15 Easting: 780400 Northing: 3301660
Geographical Coordinates: Latitude: Longitude:

PHYSICAL SETTING

Land Form: Natural levee Slope:
Geologic Processes: Elev. ft AMSL:
Site Position:
Near Water: Flooding:
Soil Characteristics: Sharkey
Floral Communities:
Faunal Communities:
Other Potential Resources:
Nearest Known Site:

SITE DESCRIPTION

Site Size: Plan:
Orientation: Stratigraphy:
Artifact Density: Artifact Distribution: Dredged up
Cultural Features:
Small shell midden
Cultural Affiliation:
Neo-Indian (unknown)
Presumed Function: Camp, extraction locale

COLLECTIONS

Survey Meth: Grab surface collection
Assessment of Collecting Conditions:
Description of Material:
Carved bone, Baytown Plain pottery, shell

CONDITIONS

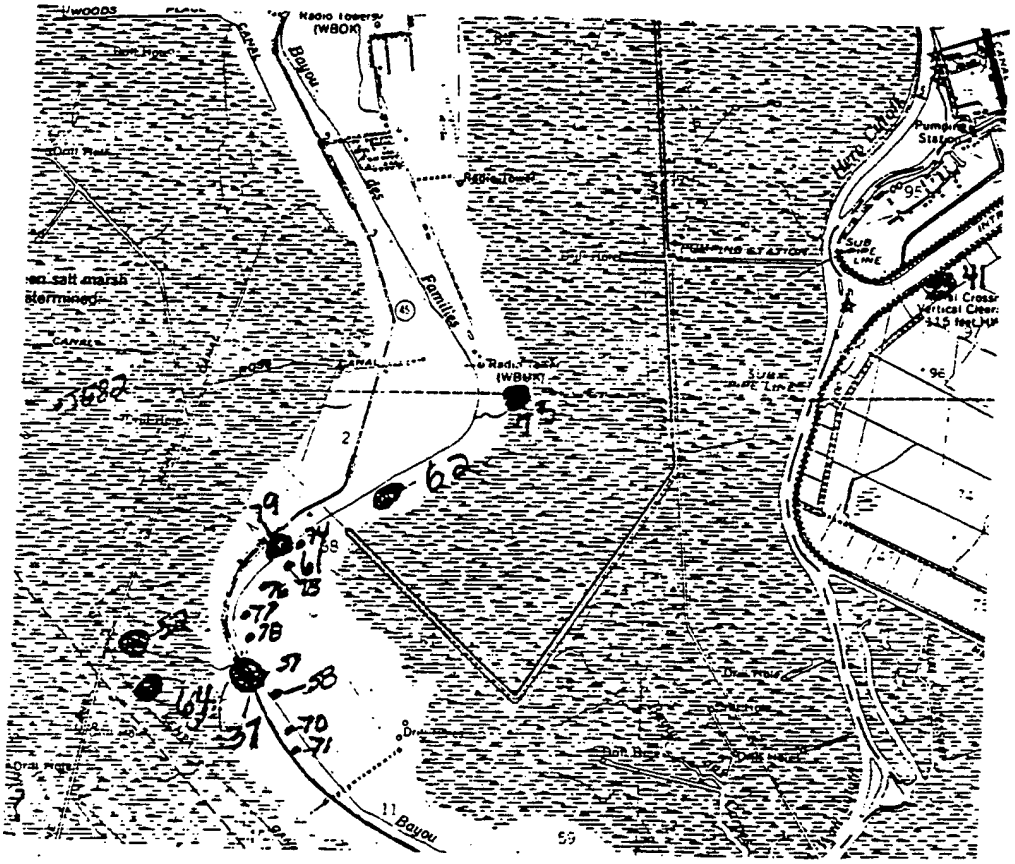
Present Use:
Erosion or Disturbance: Highway construction
Probable Future Destruction: Subject to impact from highway construction

SITE EVALUATION Site Number: 16JE73

Research Potential:

State/National Register Eligibility: Not eligible
Recommendations:

QUAD MAP OF SITE AREA



RECORDS

Owner and Address:

Tenant and Address:

Informants: UNO students
Prev. Invest: Goodwin, et al (1984); Weinstein and Burden (n/d)
Previous Collections and Availability:
DAHP 76/557 and 558
References: Weinstein (1976); Beavers (1980); Goodwin (1985); Kelley (1986)
Photos and Maps:
Remarks:

Recorder: A. Prieto Date: 2/2/81

STATE OF LOUISIANA

REFERENCE FORM

Site Name _____ Site Survey Number 16JE73

References

22-31 Weinstein, Richard and Eileen Burden

1976 Impacts on archaeological sites. In Supplemental environmental assessments: Larose-Lafitte highway Wagner's Ferry bridge to Estelle, LA 3134, Jefferson Parish (Section 3). Unpublished report on file in the Division of Archaeology and Historic Preservation, Department of Culture, Recreation and Tourism, Baton Rouge.

22-664 Beavers, Richard C., David Kelley and Teresia R. Lamb

1980 Archaeological cultural resources review and assessment for Jefferson Parish Westbank 201 EIS, Jefferson Parish, Louisiana. Unpublished report on file at the Division of Archaeology and Historic Preservation, Department of Culture, Recreation and Tourism, Baton Rouge.

22-1000 Goodwin, R. Christopher, Jill-Karen Yakubik, Peter A. Gendel, Kenneth Jones, Debra Stayner, Cyd H. Goodwin, Galloway W. Selby, and Janice Cooper (R. Christopher Goodwin and Associates, Inc.)

1985 Preserving the Past for the Future: A Comprehensive Archaeological and Historic Sites Inventory of Jefferson Parish, Louisiana. Submitted to the Division of Archaeology, Department of Culture, Recreation and Tourism, and to the Jefferson Parish Council, Jefferson Parish Historical Commission, and the Jefferson Historical Society of Louisiana. Report on file at the Division of Archaeology. 3 volumes. 768 pages.

STATE OF LOUISIANA

REFERENCE FORM

Site Name _____ Site Survey Number 16JE73

References

22-1158 Kelley, David B. and Douglas D. Bryant (Coastal Environments, Inc.)

1986 A Cultural Resources Survey of the Estelle Plantation Tract, Jefferson Parish, Louisiana. Submitted to J.J. Krebs and Sons, Inc. Report on file at the Division of Archaeology.

22-1232 Speaker, John Stuart et al. (R. Christopher Goodwin & Associates, Inc.)

1986 Archeological Assessment of the Barataria Unit, Jean Lafitte National Historical Park. Submitted to the National Park Service, Southwest Region. Report on file at the Division of Archaeology.

APPENDIX F

STATE WATER QUALITY CERTIFICATION

State of Louisiana

Department of Environmental Quality

Edwin W. Edwards
Governor

FEB 01 1993

Kai David Midboe
Secretary

WQC 921109-12

Thomas A. Sands
4500 One Shell Square
New Orleans, LA 70139

Attention: Mr. Thomas A. Sands, Agent for Estelle Plantation Partnership

Dear Mr. Sands:

RE: Proposal for Estelle Plantation Partnership to place fill material for the construction of a public golf course and construction of residential and commercial uses on the area surrounding the golf course, Jefferson Parish.

This is to acknowledge that you have completed the requirements for Water Quality Certification for the above referenced proposal.

It is our opinion that your proposed project will not violate water quality standards of the State of Louisiana, therefore, we offer no objection to this project provided that the fill material used is free of contaminants, that all practicable means are utilized to minimize any discharge of water pollutants that can result from the proposed project, that a state wastewater discharge permit is obtained from this office for any discharges from the site and that the development utilizes a centralized sewage system. However, if a centralized system is not available, a state approved individual sewage treatment system may be installed.

In accordance with statutory authority contained in the Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the Clean Water Act (P.L. 95-217), the Office of Water Resources certifies that it is reasonable to expect that water quality standards of Louisiana provided for under Section 303 of P.L. 95-217 will not be violated.

Sincerely,

J Dale Givens, Assistant Secretary
Office of Water Resources

JDG:JWL
c: Corps of Engineers, New Orleans
Coastal Management Division

APPENDIX G

LETTER FROM THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES/OFFICE OF CONSERVATION

State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JACK McCLANAHAN
SECRETARY

ERNEST A. BURGUIÈRES, III
COMMISSIONER AND
ASSISTANT SECRETARY

DEPARTMENT OF NATURAL RESOURCES

April 26, 1995

Ms. Barbara Bossier
Hartman Engineering
527 West Esplanade, Suite 300
Kenner, Louisiana 70065

Re: List of wells within a five mile radius of a specified point

Dear Ms. Bossier:

Enclosed are copies of computer printouts indicating drilling activity for the area concerned. However, we do not express any opinion as to the accuracy of these records or as to their completeness. If your inquiry is directed for purposes of a title search, we recommend that you conduct a thorough review of our files.

Should you require additional information concerning the possible participation of the subject acreage in units established by the Office of Conservation, our files are available for review in this regard as well.

Sincerely yours,

Calvin Thomas

Calvin C. Thomas, Director
Geological Oil and Gas Division

CCT:DPE:rld
Enclosures

RECEIVED
APR 28 1995

FAWLST WELL-STATUS CODE 27 CONTINUE

WELL STATUS	DESCRIPTION
01	PERMITTED
02	INJECTION PERMITTED
03	PERMIT EXPIRED
10	ACTIVE - PRODUCING
11	ACTIVE PRODUCING/CYCLIC INJCT
13	OPERATOR CHANGE - NO MD10RA
16	MULTIPLY COMPLETED/PA-35 WELL
17	EDUCATIONAL/SERVICE COMPANY
18	TEMPORARILY ABANDONED WELL
19	INACTIVE WELL, NO RESP. PARTY
20	PA-35 WELL
21	RVRTD TO LANDOWNER-FRESH WATER
22	REVERTED TO SINGLE COMPLETION
23	ACT 404 ORPHAN WELL-ENG
24	RVRTD L/O-RESIDENT CONSUMPTION
25	FEDERAL WELLS-FRMLY ST. JURIS.
26	ACT 404 ORPHAN WELL-I&M
27	ABANDONED SWD - NOT PLUGGED

FAWLST WELL-STATUS CODE 50 CONTINUE

WELL STATUS	DESCRIPTION
27	ABANDONED SWD - NOT PLUGGED
28	UNABLE TO LOCATE WELL-NO P&A
29	DRY AND PLUGGED
30	PLUGGED AND ABANDONED
31	SHUT-IN DRY HOLE - FU
32	SHUT-IN DRY HOLE - NFU
33	SHUT-IN PRODUCTIVE - FU
34	SHUT-IN PRODUCTIVE - NFU
36	SHUT-IN WAITING ON PIPELINE
37	SHUT-IN WAITING ON MARKET
41	INJECTION - GAS
42	INJECTION - WATER
43	INJECTION - OTHER
44	STORAGE CAVITY - LIQUID
45	STORAGE CAVITY - GAS
46	FORMATION STORAGE - GAS
47	STORAGE CAVITY - LPG
49	OBSERVATION
50	FIRE FLOOD

FAWLST WELL-STATUS CODE 99

WELL STATUS	DESCRIPTION
50	FIRE FLOOD
61	HAZARDOUS WASTE DISPOSAL
62	INDUSTRIAL NH WASTE DISPOSAL
63	SALT WATER DISPOSAL
64	ACTIVE PRODUCING/ANNULAR SWD
65	CLASS V - INJECTION
66	COMMERCIAL SALT WATER DISPOSAL
71	BRINE
72	SULPHUR
73	WATER
74	GEO PRESSURE
75	LIGNITE
76	URANIUM
77	BROMINE
78	IRON ORE
80	* UNKNOWN *
99	SALT WATER OIL RECOVERY POINT

FAWLST WELL-STATUS CODE 99

WELL STATUS	DESCRIPTION
99	SALT WATER OIL RECOVERY POINT

FACONV L A M B E R T C O N V E R S I O N S C R E E N 10/04/95
07:54:49

ENTER AN "X" FOR LAMBERT TO LAT-LONG OR
ENTER AN "L" FOR LAT-LONG TO LAMBERT -->

LATITUDE DEG 29 MIN 49 SEC 30.00000

LONGITUDE DEG 90 MIN 6 SEC 18.00000

LAMBERT - X 2389489.236

LAMBERT - Y 423308.513

ZONE S

*FACONV COMPLETED *

FAXYWD CTR-X 2389489 CTR-Y 0423308 RAD. 05.00 MI. ZONE (N/S) S (CONTINUE) _

LMBRT-X	LMBRT-Y	SERIAL	WELL-NAME	WELL-NO	ST	DEPTH	FLD	PA
2363690	0423850	195351	SL 11136	001	33	11100	2952	45
2364460	0424350	199623	SL 11136	002	31	11500	2952	26
2366448	0418886	082692	TIMKEN	001	29	10240	9739	45
2367408	0411696	037875	STATE LEASE NO 1589	001	29	11303	9721	45
2367673	0416862	104114	ROBERT W TIMKEN	001	29	11428	9739	45
2367907	0431338	112622	LL & E	001	29	9820	9739	26
2368988	0415457	031976	ST LSE 642-LAKE SALVADOR	003	29	11656	5590	26
2369400	0428050	165879	LL&E FEE	001	29	10315	1174	26
2369468	0418117	069462	LA LAND & EXPLORATION CO 4	001	29	11392	9739	26
2370871	0407988	095582	LA ST LSE 3931	001	29	11254	1265	45
2370875	0435623	096418	CITY OF NEW ORLEANS	001	29	09500	1174	26
2371310	0424136	056312	CTY OF NEW ORLEANS	001	29	11749	9739	26
2371471	0427010	087877	CITY OF NEW ORLEANS	001	30	10695	9739	26
2371493	0437230	084867	B SEG CELOTEX SU;CITY NO ET AL	001	30	09798	1174	26
2372411	0440178	092108	CELOTEX SUG;MARRERO L&E CO	007	29	09388	1174	26
2372492	0429421	083959	CITY OF NEW ORLEANS	001	28	10521	1174	26
2372520	0420512	051724	CITY OF NEW ORLEANS	001	29	11510	9739	26
2372549	0436222	095051	CITY OF N O	001	29	09520	1174	26

(237255504140390480 31)

*FAXYWD COMPLETED *

FAXYWD CTR-X 2389489 CTR-Y 0423308 RAD. 05.00 MI. ZONE (N/S) S (CONTINUE) _

LMBRT-X	LMBRT-Y	SERIAL	WELL-NAME	WELL-NO	ST	DEPTH	FLD	PA
2372555	0414039	048031	NEW ORLEANS PLANTATION CO INC	001	29	12046	9739	26
2372620	0441678	084715	CELOTEX SAND UNIT 8-SL 3734	001	29	09356	1174	26
2372692	0434733	092396	CITY OF NEW ORLEANS	001	29	09805	1174	26
2372775	0438916	089884	B SEG CELOTEX SU;MARRERO L&ICO	005	10	10005	1174	26
2373471	0411357	100559	NEW ORLEANS PLANTATION TRUST	001	29	10500	9739	26
2373615	0403467	131225	SL 5355	001	29	11505	9739	26
2373723	0426924	098559	MARRERO L & IMPR ASSN LTD	001	29	10101	1174	26
2373765	0432089	115363	CITY NEW ORLEANS TRUSTEE ET AL	001	29	9845	9739	26
2373828	0438272	090840	B SEG CELOTEX SU;MARRERO L&TCO	006	30	09655	1174	26
2373932	0440455	081885	B SEG CELOTEX SU;MARRERO L&ICO	002	30	09300	1174	26
2374271	0441440	081050	B SEG CELOTEX SU;W TNOLAN	001	30	09220	1174	26
2374576	0442571	107500	B SEG CELOTEX SU; NOLAN	004	30	09350	1174	26
2374599	0443444	107578	B SEG CELOTEX SU;MARRERO L&ICO	008	10	09350	1174	26
2374667	0439881	080320	MARRERO SWD	001	30	10160	1174	26
2374817	0440682	136557	B SEG CELOTEX SU	002	30	09400	1174	26
2374841	0444537	055527	MARRERO LD&TMP ASS	001	29	10020	9739	26
2375312	0441887	107499	B SEG CELOTEX SU;BOYD	001	10	09350	1174	26
2375351	0441197	079754	B SEG CELOTEX SU;CELOTEX CORP	001	33	10500	1174	26

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*FAXYWD COMPLETED *

FAXYWD CTR-X 2389489 CTR-Y 0423308 RAD. 05.00 MI. ZONE (N/S) S (CONTINUE) _

LMBRT-X	LMBRT-Y	SERIAL	WELL-NAME	WELL-NO	ST	DEPTH	FLD	PA
2375400	0442616	116440	B SEG CELOTEX SU; V.A.PITRE	002	30	09500	1174	26
2375456	0443307	084987	CELOTEX SAND UNIT 10	001	03	00000	1174	26
2375456	0443307	088081	B SEG CELOTEX SU;V.A. PITRE	001	30	10332	1174	26
2375459	0430724	101624	MARRERO LAND	001	29	10024	1174	26
2375602	0444509	090137	B SEG CELOTEX SU;W T NOLAN	002	30	09595	1174	26
2375796	0416545	050883	NEW ORLEANS PLANTATION CO	001	29	11168	9733	26
2376000	0402180	163656	LL&E	001	29	11313	9739	26
2376168	0438841	083557	CLEOTEX SAND UNIT NO 6	001	29	9424	1174	26
2376195	0442369	085071	B SEG CELOTEX SU;CELOTEX CORP	003	18	09750	1174	26
2376283	0446043	098702	B SEG CELOTEX SU	003	30	09552	1174	26
2376301	0441316	107270	B SEG CELOTEX SU; CELOTEX	008	30	09270	1174	26
2376392	0429048	201000	BAYOU DES FAMILLES DEV CORP	001	29	11007	9739	26
2376565	0440300	081654	CELOTEX SWD	002	63	09390	1174	26
2376656	0443720	088333	B SEG CELOTEX SU;CELOTEX CORP	004	30	09510	1174	26
2376989	0445500	203350	B SEG CELOTEX SU;CELOTEX	009	03	11300	1174	26
2377334	0436453	082661	CITY OF NEW ORLEANS	001	29	09960	1174	26
2377797	0440313	083161	B SEG CELOTEX SU;G MAYRONNE	001	18	09340	1174	26
2377811	0424130	099887	CANAL ASSETS INC	001	03	00000	9739	26

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*FAXYWD COMPLETED *

FAXYWD CTR-X 2389489 CTR-Y 0423308 RAD. 05.00 MI. ZONE (N/S) S (CONTINUE) _

LMBRT-X	LMBRT-Y	SERIAL	WELL-NAME	WELL-NO	ST	DEPTH	FLD	PA
2377815	0426712	051700	CANAL BANK & TRUST CO	001	33	10500	9739	26
2377878	0408494	070192	NEW ORLEANS PLANTATION TRUST	001	29	11000	9739	26
2378639	0399410	089317	M T MALONE	001	29	11620	9739	26
2378742	0442508	085892	B SEG CELOTEX SU;G.MAYRONNE	002	30	10090	1174	26
2378926	0444907	105817	MAYRONNE EST	003	29	09250	1174	26
2379193	0440582	086127	LERAB LAND CO	001	29	10050	1174	26
2379957	0443245	087423	LARAB LAND CO	002	29	10000	1174	26
2380147	0409935	064602	NEW ORLEANS PLANTATION TRUST	001	29	10793	9739	26
2380618	0431615	080877	CANAL ASSETS	001	29	10500	9739	26
2381033	0431292	076588	CANAL ASSETS INC	001	29	10800	9739	26
2381679	0436244	109327	JOSEPH RATHBORNE EST	001	29	10200	9739	26
2381874	0429700	094679	CANAL ASSETS INC	001	29	10500	9739	26
2382305	0418904	058327	CANAL ASSETS INC	001	29	10706	9739	26
2382604	0442211	049876	LERAB LAND CO INC	001	29	9988	9739	26
2383520	0399898	038938	N O PLANTATION CO SL NO 706	001	29	11595	9739	26
2386604	0441133	088867	LERAB LAND CO INC	001	30	10017	9249	26
2386816	0445026	097991	ANTHONY J GAMBINO	001	29	9722	9249	26
2387203	0438376	100934	WOODLAWN ACRES INC	001	29	10000	9249	26

(23872040150686127727)

*FAXYWD COMPLETED *

FAXYWD CTR-X 2389489 CTR-Y 0423308 RAD. 05.00 MI. ZONE (N/S) S (CONTINUE) _

LMBRT-X	LMBRT-Y	SERIAL	WELL-NAME	WELL-NO	ST	DEPTH	FLD	PA
2388883	0408755	120969	CANAL ASSETS	001	25	11300	3120	26
2389151	0448943	112327	L H MARRERO III ET AL 2 U 1	001	25	09500	9739	26
2389344	0410215	092190	F H DIETZE ET AL	001	30	11394	3120	26
2390061	0411313	094402	F H DIETZE	002	33	11150	3120	26
2390126	0440734	106130	M GAMBINO	001	25	08100	9739	26
2390799	0407612	117182	F G DIETZ ETAL	002	25	11174	3120	26
2390842	0409540	116046	F H DIETZ ET AL	001	30	11200	3120	26
2392871	0409598	118220	F H DIETZ ET AL	003	25	11200	3120	26
2393250	0398110	084982	MARY T MALONE ETAL	001	25	11820	9739	26
2393276	0407348	129261	FOSTER CREPPEL	001	25	11300	3120	26
2393658	0398515	040952	MARGARET THORNE ET AL	001	25	10105	9739	26
2393893	0411900	137124	DIETZE	001	25	9865	3120	26
2394334	0438525	074114	MARS REALTY CORP ET AL UNIT 1	001	25	14797	6560	26
2394846	0440967	063801	VALLEY REALTY CO ET AL UNIT 1	001	25	10100	6560	26
2394858	0445695	093590	MARRERO LAND & IMP ASSN LTD 3	002	25	09500	9739	26
2394966	0424094	079407	ESTELLE CORPORATION	001	25	10700	9739	26
2395383	0409080	101400	FOSTER E CREPPEL	001	25	11300	9739	26
2396350	0409400	184262	MRS P K CROWELL ET AL	001	05	11300	3120	26

(23963500420020183151)

*FAXYWD COMPLETED *

FAXYWD CTR-X 2389489 CTR-Y 0423308 RAD. 05.00 MI. ZONE (N/S) S (CONTINUE) _

LMBRT-X	LMBRT-Y	SERIAL	WELL-NAME	WELL-NO	ST	DEPTH	FLD	PA
2396350	0420020	183151	ICM REALTY	001	29	11900	3120	26
2397286	0441066	062038	9300 SUA;MARRERO LD & IMP	001	30	09800	6560	26
2397312	0438703	064827	9300' GU2;MARS REALTY	001	30	09500	6560	26
2397835	0443036	104060	MARRERO LD&IMP ASSN LTD 3	003	29	9600	6560	26
2398123	0410892	112845	ANNE C HERRICK ET AL	001	29	11006	9739	26
2398813	0439133	139094	9200 RA SUA;HARVEY LD	001	30	09730	6560	26
2398834	0409772	075009	ANNIE HERRICK ETAL	001	29	11622	9739	26
2400174	0411896	099632	ANNIE C HERRICK	001	29	11008	9739	26
2400288	0413134	154479	ANNIE C HERRICK	001	08	00000	3120	26
2400288	0413134	156796	ANNIE C HERRICK	001	29	11000	3120	26
2400925	0410013	078098	ANNIE HERRICK ETAL	002	29	14002	9739	26
2401025	0412378	097514	ANNIE C HERRICK	001	29	11300	9739	26
2401094	0432017	139744	HARVEY LAND INVESTMENT CO	001	29	10000	6560	26
2401567	0440895	068731	HARVEY CO/UNIT/	001	29	9500	6560	26
2402063	0424681	091772	HERO LAND COMPANY	001	29	10637	9739	38
2402069	0437153	167984	HARVEY CANAL LD & IMP CO	001	29	10100	6560	26
2402439	0442251	066268	A M BARNES ETAL	001	29	10390	6560	26
2403664	0420408	100454	GEORGE A HERO JR ETAL	001	29	10900	9739	38

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*FAXYWD COMPLETED *

FAXYWD CTR-X 2389489 CTR-Y 0423308 RAD. 05.00 MI. ZONE (N/S) S ( ) _

LMBRT-X	LMBRT-Y	SERIAL	WELL-NAME	WELL-NO	ST	DEPTH	FLD	PA
2403820	0414880	198560	NUMA HERO	001	29	11000	9739	38
2403918	0431073	145499	H T TELLEPSEN	001	29	10310	9739	26
2404090	0433400	184790	W U CORPORATION	001	29	10000	6560	26
2404781	0433362	131717	NUMA C HERO ET AL	001	29	10300	9739	26
2405695	0425995	143396	HERO	001	29	11011	9739	38
2405901	0421742	082394	NUMA HERO ETAL	001	29	12042	9739	38
2406264	0431783	136843	NUMA C HERO ETAL	001	29	10143	9739	26
2406487	0417530	098293	JEFF-PLAQ DRAINAGE DISTRICT	001	29	11000	9739	38
2407099	0433684	141009	NUMA C HERO ETAL	001	29	9970	9739	26
2407999	0424093	102372	GEORGE A HERO JR ETAL	001	29	10800	9739	38
2408985	0429486	105807	GEO A HERO	001	29	10758	9739	38
2409445	0407763	122740	LAFOURCHE BASIN LEVEE DIST	022	30	01206	5356	38
2410684	0420628	114339	NUMA HERO ETAL	001	29	10744	9739	38
2414521	0416675	087467	CITY DEVELOPMENT COMPANY INC	001	29	13204	8703	38

( )

*FAXYWD COMPLETED *

State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JACK McCLANAHAN
SECRETARY

ERNEST A. BURGUIÈRES, III
COMMISSIONER AND
ASSISTANT SECRETARY

DEPARTMENT OF NATURAL RESOURCES

June 8, 1995

Ms. Barbara D. Bossier
Hartman Engineering, Inc.
527 W. Esplanade, Suite 300
Kenner, Louisiana 70065

Re: R25E and T14S - S8 and 9
R24E and T14S - S2
R23E and T14S - S95
R24E and T14S - S82 and 95
R22E and T13S - S1
R22E and T12S - S1

Dear Ms. Bossier:

Our computer records do not indicate any past or present drilling activity within the above referenced area. I have enclosed copies of the computer records for the other areas of interest where some drilling activity is known. These indicate that the wells (referenced by serial number) were drilled and plugged with no production. However, we do not express any opinion as to the accuracy of these records or as to their completeness. If your inquiry is directed for purposes of a title search, we recommend that you conduct a thorough review of our files.

Should you require additional information concerning the possible participation of the subject acreage in units established by the Office of Conservation, our files are available for review in this regard as well. As discussed by telephone, due to the lack of staff and resources, this Office will be unable to answer further drilling activity inquiries from your company; however, Ethel Mae Pierce should be able to assist you with your future requests.

Sincerely yours,

Calvin C. Thomas, Director
Geological Oil and Gas Division

CCT:MBK:rld
Enclosures

JUN 0 8 1995

.TR SECTION 001 TOWNSHIP 14S RANGE 24E ( ) ( )

DATE: 06/05/95

PAR	SERIAL	ST	FIELD	OPER	WELL NAME	WELL NO	LUW	CODE	API NUMBER
026	063801	29	6560	9999	VALLEY REALTY CO ET AL U	001	0	000000	1705100145

FASTR SECTION 001 TOWNSHIP 14S RANGE 23E ( ) ( )

DATE: 06/05/95

PAR	SERIAL	ST	FIELD	OPER	WELL NAME	WELL NO	LUW	CODE	API NUMBER
026	093590	29	9739	9999	MARRERO LAND & IMP ASSN	002	0	000000	1705100144

FASTR SECTION 055 TOWNSHIP 14S RANGE 24E ( ) ( )

DATE: 06/05/95

PAR	SERIAL	ST	FIELD	OPER	WELL NAME	WELL NO	LUW	CODE	API NUMBER
026	174164	29	9739	3521	ICM REALTY	001	0	000000	1705120578
026	183151	29	3120	9999	ICM REALTY	001	0	000000	1705120629

FASTR SECTION 004 TOWNSHIP 13S RANGE 08E ( ) ( )

DATE: 06/05/95

PAR	SERIAL	ST	FIELD	OPER	WELL NAME	WELL NO	LUW	CODE	API NUMBER
045	140457	29	6284	9999	AMOCO PROD CO FEE	001	0	000000	1708920196

FASTR SECTION 004 TOWNSHIP 12S RANGE 08E ( ) ( )

DATE: 06/05/95

PAR	SERIAL	ST	FIELD	OPER	WELL NAME	WELL NO	LUW	CODE	API NUMBER
023	059507	29	3808	9999	JEANERETTE	003	0	000000	1704500174
023	062540	29	3808	9999	JEANRETTE LUMBER & SHING	001	0	000000	1704500175
045	970928	29	9721	5386	NORCO WASTE DISPOSAL	004	0	000000	1708988020

APPENDIX H

WELL INFORMATION FROM THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DOTD'S USE AND SUB-USE COMPUTER CODES FOR WATER WELLS AND HOLES

	WELL USE	SUB-USE	
A	Any Use	- A	Abandoned
		- D	Destroyed
		E X	Excavated Out
		P A	Plugged
B	Borehole/Pilot Hole	- -	
C	Cathodic	- -	
D	Dewatering	- -	
E	Power Generation	- -	
H	Domestic	- -	
I	Irrigation	- -	
		- Q	Aquaculture
		- S	Stock
L	Heat Pump	H H	Hole
		H S	Supply Well
M	Monitor	- -	
N	Industrial	2 0	Food and kindred products
		2 2	Textile mill products
		2 4	Lumber & wood products
		2 6	Paper & allied products
		2 8	Chemicals & allied products
		2 9	Petroleum refining and related industries
		3 3	Primary metal industries
		9 9	Other
O	Observation	- O	Multiple Purpose
		- Q	Water Quality
		- W	Water Level
P	Public Supply	- C	Commercial
		- M	Therapeutic
		- P	Municipal
		- R	Rural
		- T	Institution/Government
		- Z	Other
R	Recovery	- -	
S	Rig Supply	- -	
T	Test Hole	- -	
W	Piezometer	- -	
Z	Other	- F	Fire Protection
		- I	Inactive
		- R	Reworked
		- S	Standby
		- U	Unknown
		- Z	Other

ZB:mql
11/30/93
1.013

EXPLANATION OF TERMS FOR THE LOUISIANA DEPT. OF TRANSPORTATION AND DEVELOPMENT'S COMPUTERIZED LISTING OF REGISTERED WATER WELLS AND HOLES

IDENTIFICATION NUMBER - This is a unique I.D. number that includes the latitude (first six numbers), longitude (second six numbers), and a sequential number (last two digits). The sequential number identifies a specific well when other nearby wells have the same latitude and longitude.

REVISED COORDINATES - Latitude and Longitude of a well (shown only if different than the I.D. number).

OWNER'S NAME - Name of an individual, company or agency who was or is either the legal owner of the property or the lessee at the time the well was inventoried or registered.

WELL NUMBER - Well number, by parish, assigned either by the U.S. Geological Survey or LA. DOTD.

OWNER'S NUMBER - Well name or number assigned by the owner to identify each well on his/her property.

GEOLOGIC UNIT - Aquifer in which the well is screened.

WELL DEPTH - Depth of the well, in feet, measured from bottom of the screen (or bottom of the tail pipe, back pressure valve, etc.) to the ground surface.

WELL USE/SUBUSE - Main use of the well (see attached sheet). The use of the well is subject to change and may not be up-to-date, especially for older wells.

CASING/SCREEN DIAMETER - Nominal diameter of casing/screen, in inches.

SCREEN INTERVAL - Depth, in feet, measured from ground surface to the top and bottom of the screen.

DATE COMPLETED - The month and year the well was completed.

AVAILABLE INFORMATION - Indicates available information as follows:

- E - Geophysical Log
- D - Drillers Log
- M - Mechanical Analysis
- Q - Quality of Water
- B - Bacteriological Analysis
- P - Pumping Test
- W - Water Level

Available information may be obtained from DOTD, USGS, driller, engineer, and/or other sources.

ZB:DL:mql
1/19/93
1.014

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

WELL0040 — LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM — PAGE 1

DATE: 05/18/95 — WATER WELL REPORT SELECTION CRITERIA

		PARISH BOUNDARIES MAX-N	MIN-S	MIN-E	MAX-W
PARISH(ES) REQUESTED :	051 - JEFFERSON	300301	290942	895313	901648
USES REQUESTED :	ALL - ALL USES				
AQUIFERS REQUESTED :	ALL - ALL AQUIFERS				
LOCATION REQUESTED:	SECTION ALL TOWNSHIP ALL RANGE ALL				
COMMENTS :	REQUESTED BY: HARTMAN ENGINEERING, INC.				

NUMBER OF RECORDS SELECTED = 1,351

Ms. Barbara Bossier

Pl. remit a check for $14.25 as discussed.

Regards

"Bo"

5/25/95

RECEIVED

MAY 30 1995

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATO ROUGE

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 1

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
089	- 19	AMOCO OIL 19	295657 / 902154	SHALLOW AQUIFERS OF NEW ORLEANS AREA / BLAKEMORE A	004	13S	08E	INDUSTRIAL	417 PA	12X10	MULTIPLE	1943	D Q W
089	- 20	AMOCO OIL 20	295655 / 902153	GRAMERCY AQUIFER / UNKNOWN	004	13S	08E	INDUSTRIAL	484 PA	24X12X10	MULTIPLE	1939	Q W
089	- 21	AMOCO OIL 9	295657 / 902153	NORCO AQUIFER / LAYNE (LA)	004	13S	08E	INDUSTRIAL	306 -A	16X8	8 240-306	1940	Q W
089	- 22	SAIZAN, HENRY	295935 / 902403	NORCO AQUIFER / DELAUNE H	006	12S	08E	PUBLIC SUPPLY	389 -D	2.50 METAL		1935	Q W
089	- 24	INT'L TANK TERM	295635 / 901937	NORCO AQUIFER / LAYNE (LA)	040	13S	09E	INDUSTRIAL	492 -A	18X8	6 439-492	0921	Q W
089	- 25	AMOCO OIL 25	295658 / 902128	NORCO AQUIFER / LAYNE (LA)	004	13S	08E	INDUSTRIAL	476 PA	20	396-476	0656	W
089	- 26	CLESI, B F	295730 / 901710	NORCO AQUIFER / SELLERS	001	13S	22E	DOMESTIC	363 -A	2		1936	Q
089	- 31	PRESTON, MADERE	295751 / 902414	GRAMERCY AQUIFER / DELAUNE H	017	13S	20E	PUBLIC SUPPLY	147 -A	3		1038	Q W
089	- 32	PRESTON, MADERE	295751 / 902415	POINT-BAR DEPOSITS / DELAUNE H	017	13S	20E	PUBLIC SUPPLY	117 -A	4 METAL		1937	Q W
089	- 35	SC POLICE JURY	295749 / 902425	GRAMERCY AQUIFER / DELAUNE H	018	13S	20E	PUBLIC SUPPLY	270 -A	3 METAL	238-260	0437 E	Q W
089	- 42	MATTINGLY, C W	295709 / 901851	NORCO AQUIFER / HEBERT A J	038	13S	09E	DOMESTIC	460 --	2		1942	Q
089	- 43	LANDRY, BOB	295732 / 901822	NORCO AQUIFER / UNKNOWN	040	12S	09E	DOMESTIC	400 -D	2			Q
089	- 47	PURE OIL CO	295952 / 902320	GRAMERCY AQUIFER / UNKNOWN	007	12S	08E	INDUSTRIAL	175 -A	4	4 155-175	1948	Q W
089	- 48	AMOCO OIL 48	295651 / 902141	NORCO AQUIFER / LAYNE (LA)	004	13S	08E	OBSERVATION	330 PA	18X8	246-327	0643 ED	Q W
089	- 49	AMOCO OIL 49	295702 / 902148	NORCO AQUIFER / EBERHART	004	13S	08E	INDUSTRIAL	476 PA	18X12X12	MULTIPLE	1246 EDMQ	W
089	- 58	SHELL OIL NMC	295956 / 902237	NORCO AQUIFER / WATSON WTR	007	12S	08E	INDUSTRIAL	364 -D	9	4 324-364	1948 D	Q W
089	- 59	EXXON CO USA	300032 / 902238	NORCO AQUIFER / UNKNOWN	007	12S	08E	INDUSTRIAL	300 -A	4			Q W

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LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	TOWN SHIP	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO
089	- 63	HYMEL, SIDNEY	295601 902148	NORCO AQUIFER UNKNOWN	014	13S	21E	DOMESTIC	475 -D	2		1943	Q W
089	- 70	GOODMAN,CHARLES	295711 901846	NORCO AQUIFER UNKNOWN	038	13S	09E	IRRIGATION	520 -A	3 METAL		1941	Q W
089	- 71	AMOCO OIL 71	295702 902138	NORCO AQUIFER LAYNE (LA)	004	13S	08E	INDUSTRIAL	489 PA	20	12 409-489	0954	ED Q W
089	- 73	VIAL, LEON C	295704 902444	GRAMERCY AQUIFER A & M DRLG	008	13S	20E	IRRIGATION	262 -S	1.50 METAL	1.50	0652	D Q W
089	- 76	EXXON CO USA	300027 902228	NORCO AQUIFER EXXON CO USA	007	12S	08E	INDUSTRIAL	379 -A	4	4 334-379	0645	D W
089	- 77	EXXON CO USA	300045 902224	NORCO AQUIFER UNKNOWN	007	12S	08E	INDUSTRIAL	373 -A	4			E W
089	- 78	EXXON CO USA	300010 902215	AQUIFER UNKNOWN UNKNOWN	007	12S	08E	INDUSTRIAL	-A	4			
089	- 79	EXXON CO USA	300019 902222	AQUIFER UNKNOWN UNKNOWN				INDUSTRIAL	-A	4			
089	- 80	CHAMPAGNE, A	295556 902142	GRAMERCY AQUIFER BURLEIGH C C	015	13S	21E	DOMESTIC	256 +A	1.25		0445	W
089	- 81	PIZZOLATO& POST	295600 901850	GRAMERCY AQUIFER A & M DRLG	065	13S	21E	DOMESTIC	300 -A	2	288-300	1944	Q W
089	- 83	LANDRY, BOB	295735 901823	NORCO AQUIFER A & M DRLG	040	12S	09E	IRRIGATION	360 -A	2	336-360	1956	W
089	- 85	CALIF CO	295815 901825	GRAMERCY AQUIFER HEBERT A J	040	12S	09E	OTHER	206 -D	4 PLASTIC	4 186-206	0657	D Q W
089	- 96	SHELL OIL NMC	295956 902242	NORCO AQUIFER HEBERT A J	007	12S	08E	INDUSTRIAL	370 -A	2 METAL	2 350-370	1057	D Q
089	- 99	FRANCIS, GEORGE	295648 902021	NORCO AQUIFER LAMBERT'S	041	13S	09E	IRRIGATION	350 -S	2 METAL		1950	Q
089	- 100	CITIES SERV OIL PB-54	295707 901943	NO WELL MADE, LOG DEPTH SHOWN U.S.G.S.	040	13S	09E	TEST HOLE	97 PA				D
089	- 101	CITIES SERV OIL PB-55	295644 901935	NO WELL MADE, LOG DEPTH SHOWN U.S.G.S.	040	13S	09E	TEST HOLE	82 PA			0160	D
089	- 102	U S GEOL SURVEY PB-56	295633 901931	POINT-BAR DEPOSITS U.S.G.S.	040	13S	09E	TEST HOLE	62 PA	1.25 METAL	1.25 60-62	0160	DMQ W

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WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

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PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
089	- 103	SC PARISH PB-52	295750 902308	NO WELL MADE, LOG DEPTH SHOWN U.S.G.S.	012	12S	08E	TEST HOLE	62 PA			0160	D
089	- 108	SELLERS, T B	295728 901700	POINT-BAR DEPOSITS SELLERS	001	13S	22E	IRRIGATION	200 -S	2 STEEL		1934	Q W
089	- 109	U S GEOL SURVEY	295724 902202	NO WELL MADE, LOG DEPTH SHOWN U.S.G.S.	015	12S	08E	TEST HOLE	82 PA			0760	D
089	- 110	WALTON, JOHN JR	295708 901718	POINT-BAR DEPOSITS UNKNOWN	035	13S	21E	INDUSTRIAL	67 -A	3		1950	E W
089	- 111	SELLERS, JULIUS	295716 901730	NO WELL MADE, LOG DEPTH SHOWN SELLERS	035	13S	21E	TEST HOLE	100 PA			1935	D
089	- 112	SELLERS, T B	295731 901701	POINT-BAR DEPOSITS SELLERS	001	13S	22E	DOMESTIC	80 -A	2.50 METAL		1923	Q W
089	- 113	VIAL, L C SR	295718 902419	NORCO AQUIFER DELAUNE H	008	13S	20E	DOMESTIC	285 -A	2 METAL		0537	Q W
089	- 116	DUFRESNE, E A	295634 902320	GRAMERCY AQUIFER TOUPS	001	13S	20E	DOMESTIC	260 -A	2 METAL		0542	Q W
089	- 119	MONSANTO	295535 902148	GRAMERCY AQUIFER UNKNOWN	016	13S	21E	INDUSTRIAL	280 -D	4		1936	Q
089	- 120	SC SCHOOL BOARD	295557 902148	GRAMERCY AQUIFER DELAUNE H	014	13S	21E	PUBLIC SUPPLY	270 -D	2.50 METAL		0831	Q W
089	- 128	PURE OIL CO	300027 902245	GONZALES-NEW ORLEANS AQUIFER LAUGHLIN BRO	007	12S	08E	INDUSTRIAL	690 -A	9 METAL		0644	Q W
089	- 132	BROWN, A W 1	295717 902311	NORCO AQUIFER HEBERT A J	001	13S	08E	DOMESTIC	420 -A	4 METAL		1946	W
089	- 133	BROWN, A W 2	295719 902311	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	001	13S	08E	IRRIGATION	700 --	6 METAL		1948	Q W
089	- 134	PATTERSON, RUDY	295530 902201	NORCO AQUIFER UNKNOWN	015	13S	21E	DOMESTIC	435 -D	4		1951	Q W
089	- 142	MATTINGLY, C W	295637 902334	GRAMERCY AQUIFER UNKNOWN	001	13S	20E	DOMESTIC	312 -A	2		0836	Q
089	- 143	BROWN, MICHAEL	295703 902404	GRAMERCY AQUIFER BURLEIGH C C	006	13S	20E	IRRIGATION	450 -S	2		0845	Q
089	- 144	ONEIL, LAWRENCE	295659 902358	GRAMERCY AQUIFER UNKNOWN	005	13S	20E	DOMESTIC	315 -A	2		0646	Q

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LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
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089	- 145	SHAAK, N E	295403 902304	GRAMERCY AQUIFER UNKNOWN	119	13S	20E	IRRIGATION	350 --	2		1953	Q W
089	- 147	SC POLICE JURY	295749 902425	NORCO AQUIFER UNKNOWN	018	13S	20E	PUBLIC SUPPLY	350 -A	4 METAL		0239	Q
089	- 148	SC POLICE JURY	295749 902425	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	018	13S	20E	PUBLIC SUPPLY	200 -A	2 METAL		0342	Q
089	- 150	AMOCO OIL	295657 902151	NORCO AQUIFER ARTESIAN WEL	004	13S	08E	INDUSTRIAL	500 PA	12		0923	D
089	- 155	U S CORPS ENGRS 123.0-55	295704 902348	NO WELL MADE, LOG DEPTH SHOWN U.S. ARMY (NOD)	005	13S	20E	TEST HOLE	110 PA			0155	D
089	- 156	U S CORPS ENGRS 127.7-56	295714 902319	NO WELL MADE, LOG DEPTH SHOWN U.S. ARMY (NOD)	001	13S	08E	TEST HOLE	154 PA			0656	D
089	- 157	U S CORPS ENGRS 117.95-52	295617 901855	NO WELL MADE, LOG DEPTH SHOWN U.S. ARMY (NOD)	030	13S	21E	TEST HOLE	175 PA			0252	D
089	- 160	KELLER, THEO	295814 902425	GRAMERCY AQUIFER BURLEIGH C C	022	13S	20E	DOMESTIC	289 -A	2 METAL		1945	Q W
089	- 168	GOOD HOPE REFIN 3	295949 902400	NORCO AQUIFER MENGE	006	12S	08E	INDUSTRIAL	406 29	12X8 STEEL	8 346-406	1978	DMQ W
089	- 169	BUNGE CORP	295629 902054	NO WELL MADE, LOG DEPTH SHOWN BILLEAUD (HERB)	005	13S	08E	TEST HOLE	290 PA			0678	D
089	- 170A	BUNGE CORP	295637 902051	GRAMERCY AQUIFER BILLEAUD (HERB)	005	13S	08E	TEST HOLE	247 PA	4 STEEL	3 237-247	0678	D Q
089	- 170B	BUNGE GRAIN EL 1	295637 902051	GRAMERCY AQUIFER BILLEAUD (HERB)	005	13S	08E	INDUSTRIAL	254 99	8 STEEL	8 194-254	0678	D W
089	- 171	BUNGE CORP	295622 902053	NATURAL LEVEE DEPOSITS UNKNOWN	005	13S	08E	DEWATERING	21 --	16 STEEL			Q W
089	- 172	GOOD HOPE REFIN 1	295948 902337	NORCO AQUIFER MENGE	007	12S	08E	INDUSTRIAL	415 29	10X6 STEEL	6 353-415	0877	EDM W
089	- 173	GOOD HOPE REFIN 2	295949 902358	NORCO AQUIFER MENGE	007	12S	08E	INDUSTRIAL	412 29	10 STEEL	6 351-412	1077	EDM
089	- 174	U S GEOL SURVEY	295747 902425	GRAMERCY AQUIFER LAMBERT'S	017	13S	20E	OBSERVATION	272 -O	2X2 STEEL	2 262-272	0780	ED Q W
089	- 176	ORMOND CNTRY CL	295801 902143	NORCO AQUIFER UNKNOWN				IRRIGATION	415 --	8 STEEL	8 378-415	1078	DM W

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WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

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PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5002Z	ANSYTHE EXPLOR BURKE 1	295732 901834	NORCO AQUIFER RIG WATER	041	12S	09E	RIG SUPPLY	440 PA			0681		
089	-5004Z	GOODRICH OIL S L 8654-1	295613 902228	GRAMERCY AQUIFER RIG WATER	008	13S	21E	RIG SUPPLY	320 PA			0181		
089	-5008Z	WESTLAND OIL S L 8135-1	295807 901800	NORCO AQUIFER BROWN, H.	040	12S	09E	RIG SUPPLY	445 PA			1281		
089	-5015Z	SAMSON RES MONTELEON1	300039 901901	NORCO AQUIFER RIG WATER	040	12S	09E	RIG SUPPLY	390 PA	4 STEEL	4 370-390	0384	D	
089	-5025Z	PEL-TEX OIL CO RATHBORNE1	295229 901940	GRAMERCY AQUIFER GUICHARD	010	14S	21E	RIG SUPPLY	321 PA	4 PLASTIC	4 301-321	0485	D	W
089	-5027Z	ROSEWOOD RES INT TANK 1	295715 901944	GRAMERCY AQUIFER GUICHARD	040	13S	09E	RIG SUPPLY	181 PA	4 PLASTIC	4 161-181	0985	D	W
089	-5058Z	ROSEWOOD RES I-M 2	295632 901956	GRAMERCY AQUIFER GUICHARD	041	13S	09E	RIG SUPPLY	181 PA	4 PLASTIC	4 161-181	1286	D	W
089	-5059Z	AMOCO OIL W-1D	295650 902148	NEW ORLEANS AQ. SYS. G & E	004	SURFICIAL 13S	08E	CONFINING UNIT MONITOR	79 --	2 PLASTIC	2 69-79	1086	D	W
089	-5060Z	AMOCO OIL W-1I	295650 902148	NEW ORLEANS AQ. SYS. G & E	004	SURFICIAL 13S	08E	CONFINING UNIT MONITOR	29 --	2 PLASTIC	2 24-29	1086	D	W
089	-5061Z	AMOCO OIL W-1S	295650 902148	NEW ORLEANS AQ. SYS. G & E	004	SURFICIAL 13S	08E	CONFINING UNIT MONITOR	15 --	2 PLASTIC	2 10-15	1086	D	W
089	-5062Z	AMOCO OIL W-S2	295701 902144	NEW ORLEANS AQ. SYS. G & E	004	SURFICIAL 13S	08E	CONFINING UNIT MONITOR	13 --	2 PLASTIC	2 7-12	0986	D	W
089	-5066Z	MONSANTO E- 1	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	SURFICIAL 13S	21E	CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0387	D	W
089	-5067Z	MONSANTO E- 2	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	SURFICIAL 13S	21E	CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 20-25	0387	D	W
089	-5068Z	MONSANTO E- 3	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	SURFICIAL 13S	21E	CONFINING UNIT MONITOR	27 PA	2 PLASTIC	2 22-27	0387	D	W
089	-5069Z	MONSANTO E- 4	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	SURFICIAL 13S	21E	CONFINING UNIT MONITOR	18 PA	2 PLASTIC	2 13-18	0387	D	W
089	-5070Z	MONSANTO E- 5	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	SURFICIAL 13S	21E	CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 20-25	0387	D	W
089	-5071Z	MONSANTO E- 6	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	SURFICIAL 13S	21E	CONFINING UNIT MONITOR	24 PA	2 PLASTIC	2 19-24	0387	D	W

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089	-5072Z	MONSANTO E- 7	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0387	D	W
089	-5073Z	MONSANTO E- 8	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	24 PA	2 PLASTIC	2 19-24	0387	D	W
089	-5074Z	MONSANTO E- 9	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0387	D	W
089	-5075Z	MONSANTO E-10	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	26 PA	2 PLASTIC	2 21-26	0387	D	W
089	-5076Z	MONSANTO E-11	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 20-25	0387	D	W
089	-5077Z	MONSANTO E-12	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	20 PA	2 PLASTIC	2 15-20	0387	D	W
089	-5078Z	MONSANTO E-13	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	31 PA	2 PLASTIC	2 26-31	0387	D	W
089	-5079Z	MONSANTO E-14	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	22 PA	2 PLASTIC	2 17-22	0387	D	W
089	-5080Z	MONSANTO E-15	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 20-25	0387	D	W
089	-5081Z	MONSANTO E-16	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	24 PA	2 PLASTIC	2 19-24	0387	D	W
089	-5082Z	MONSANTO EW-33	295453 902128	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	37 --	4 PLASTIC	4 28-33	0387	D	
089	-5096Z	AMOCO OIL W-2I	295701 902144	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	37 --	2 PLASTIC	2 32-37	0986	D	W
089	-5097Z	AMOCO OIL W-3I	295728 902207	NEW ORLEANS AQ. SYS G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	27 --	2 PLASTIC	2 22-27	0986	D	W
089	-5098Z	AMOCO OIL W-3S	295728 902207	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	12 --	2 PLASTIC	2 7-12	0986	D	W
089	-5099Z	AMOCO OIL W-3D	295728 902207	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	85 --	2 PLASTIC	2 72-77	0986	D	W
089	-5100Z	AMOCO OIL W-4D	295705 902120	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	85 --	2 PLASTIC	2 80-85	0986	D	W
089	-5101Z	AMOCO OIL W-4I	295705 902120	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	27 --	2 PLASTIC	2 22-27	0986	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
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WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5102Z	AMOCO OIL W-4S	295705 902120	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	14 --	2 PLASTIC	2 9-14	0986	D	W
089	-5103Z	AMOCO OIL W-5D	295740 902126	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	51 --	2 PLASTIC	2 46-51	1186	D	W
089	-5104Z	AMOCO OIL W-5I	295740 902126	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	24 --	2 PLASTIC	2 19-24	0986	D	W
089	-5105Z	AMOCO OIL W-5S	295740 902126	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	12 --	2 PLASTIC	2 7-12	0986	D	W
089	-5106Z	AMOCO OIL W-6D	295750 902120	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	82 --	2 PLASTIC	2 77-82	0986	D	W
089	-5107Z	AMOCO OIL W-6I	295750 902122	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	54 --	2 PLASTIC	2 49-54	0986	D	W
089	-5108Z	AMOCO OIL W-6S	295740 902150	NEW ORLEANS AQ. SYS. G & E	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	14 --	2 PLASTIC	2 9-14	0986	D	W
089	-5111Z	MONSANTO EO-1	295509 902107	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT MONITOR	25 --	2 STEEL	2 20-25	1187	D	W
089	-5112Z	MONSANTO EO-2	295506 902106	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT MONITOR	24 --	2 STEEL	2 19-24	1187	D	W
089	-5113Z	MONSANTO EO-3	295507 902111	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT MONITOR	22 --	2 STEEL	2 17-22	1087	D	W
089	-5114Z	MONSANTO EO-4	295504 902108	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT MONITOR	24 --	2 STEEL	2 19-24	1187		W
089	-5115Z	MONSANTO EO-5	295510 902109	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT MONITOR	25 --	2 STEEL	2 20-25	1187	D	W
089	-5116Z	MONSANTO ER-1	295508 902110	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT RECOVERY	24 --	4 STEEL	4 14-24	1087	D	W
089	-5117Z	MONSANTO ER-2	295507 902110	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT RECOVERY	28 --	4 STEEL	4 18-28	1087	D	W
089	-5118Z	MONSANTO ER-3	295506 902109	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT RECOVERY	23 --	4 STEEL	4 13-23	1187	D	W
089	-5119Z	MONSANTO ER-4	295505 902108	NEW ORLEANS AQ. SYS. GERAGHTY	019	13S	08E	SURFICIAL CONFINING UNIT RECOVERY	23 --	4 STEEL	4 13-23	1187	D	W
089	-5156Z	LA LAND & EXPLO DESTREHAN1	295654 902120	GRAMERCY AQUIFER RIG WATER	005	13S	08E	RIG SUPPLY	170 --	4 PLASTIC	4 150-170	0988	D	W

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 8

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
089	-5164Z	TRANSAMERICAN MW-5	295916 902324	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT EUSTIS	007 12S 08E	MONITOR	43 --	2 PLASTIC	2 38-43	0492	D W
089	-5165Z	MONSANTO EW-10	295507 902116	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT ZIMMERMAN	019 13S 21E	MONITOR	38 --	2 PLASTIC	2 33-38	0492	D W
089	-5166Z	MONSANTO EW-11	295509 902118	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT ZIMMERMAN	019 13S 21E	MONITOR	24 --	2 PLASTIC	2 19-24	0492	D W
089	-5167Z	RAIN TREE COURT OFFICE	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5168Z	RAIN TREE COURT BLDG1	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5169Z	RAIN TREE COURT BLDG2	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5170Z	RAIN TREE COURT BLDG3	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5171Z	RAIN TREE COURT BLDG4	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5172Z	RAIN TREE COURT BLDG5	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5173Z	RAIN TREE COURT BLDG6	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5174Z	RAIN TREE COURT BLDG7	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5175Z	RAIN TREE COURT BLDG8	295829 902434	NO WELL MADE, LOG DEPTH SHOWN FIX-YOUR-WELL	003 13S 20E	HEAT PUMP	150 HH	PLASTIC		0492	D
089	-5181Z	AMOCO OIL B-5-4	295752 902116	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT UNKNOWN	015 12S 08E	MONITOR	10 PA	2			
089	-5194Z	AMOCO OIL B-5-11	295753 902118	DELTAIC DEPOSITS, YOUNGER UNKNOWN	015 12S 08E	MONITOR	55 PA	2			
089	-5195Z	AMOCO OIL B-5-121	295755 902120	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT U & R DRILLING	015 12S 08E	MONITOR	20 PA	2		0590	
089	-5196Z	AMOCO OIL B-5-304	295751 902123	DELTAIC DEPOSITS, YOUNGER UNKNOWN	015 12S 08E	MONITOR	80 PA	2			
089	-5197Z	AMOCO OIL B-SI-D20	295751 902121	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT UNKNOWN	015 12S 08E	MONITOR	15 PA	2			

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 9

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5199Z	GATX TERMINAL P-1	295940 / 902325	NEW ORLEANS AQ. SYS. / SOUTHWESTERN	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	4 PLASTIC	4 20-40	1088	D	
089	-5200Z	GATX TERMINAL P-2	295940 / 902325	NEW ORLEANS AQ. SYS. / SOUTHWESTERN	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	20 --	4 PLASTIC	4 10-20	1088	D	
089	-5201Z	GATX TERMINAL P-3	295943 / 902326	NEW ORLEANS AQ. SYS. / SOUTHWESTERN	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	20 --	4 PLASTIC	4 10-20	1088	D	
089	-5202Z	GATX TERMINAL P-4	295944 / 902318	NEW ORLEANS AQ. SYS. / SOUTHWESTERN	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	18 --	4 PLASTIC	4 8-18	1088	D	
089	-5203Z	GATX TERMINAL P-5	295943 / 902326	NEW ORLEANS AQ. SYS. / SOUTHWESTERN	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	38 --	4 PLASTIC	4 23-28	1088	D	
089	-5204Z	GATX TERMINAL P-6	295944 / 902318	NEW ORLEANS AQ. SYS. / SOUTHWESTERN	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	34 --	4 PLASTIC	4 19-34	1088	D	
089	-5205Z	MONSANTO AN-6	295440 / 902224	NEW ORLEANS AQ. SYS. / GERAGHTY	050	13S	21E	SURFICIAL CONFINING UNIT MONITOR	31 --	2 PLASTIC	2 23-28	1288	D	W
089	-5206Z	MONSANTO AN-7	295438 / 902230	NEW ORLEANS AQ. SYS. / GERAGHTY	050	13S	21E	SURFICIAL CONFINING UNIT MONITOR	31 --	2 PLASTIC	2 23-28	1288	D	W
089	-5207Z	MONSANTO MW-F	295522 / 902110	NEW ORLEANS AQ. SYS. / EUSTIS	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	38 PA	4		0683		
089	-5208Z	MONSANTO AE-1	295430 / 902224	NEW ORLEANS AQ. SYS. / GERAGHTY	050	13S	21E	SURFICIAL CONFINING UNIT MONITOR	38 --	2 STEEL	2 31-36	1288	D	
089	-5209Z	MONSANTO AE-2	295429 / 902225	NEW ORLEANS AQ. SYS. / GERAGHTY	050	13S	21E	SURFICIAL CONFINING UNIT MONITOR	38 --	2 STEEL	2 31-36	1288	D	
089	-5210Z	MONSANTO AE-3	295429 / 902227	NEW ORLEANS AQ. SYS. / GERAGHTY	050	13S	21E	SURFICIAL CONFINING UNIT MONITOR	18 --	2 STEEL	2 11-16	0189	D	
089	-5211Z	MONSANTO AE-4	295432 / 902226	NEW ORLEANS AQ. SYS. / GERAGHTY	050	13S	21E	SURFICIAL CONFINING UNIT MONITOR	22 --	2 STEEL	2 15-20	1288	D	
089	-5221Z	MONSANTO AP-11	295514 / 902117	NEW ORLEANS AQ. SYS. / GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	23 --	4 STEEL	4 16-21	0689	D	
089	-5222Z	MONSANTO EW-66	295505 / 902119	NEW ORLEANS AQ. SYS. / GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	38 --	4 STEEL	4 32-36	0789	D	
089	-5223Z	MONSANTO WP-1	295520 / 902116	NEW ORLEANS AQ. SYS. / GERAGHTY	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	28 --	4 STEEL	4 21-26	0689	D	
089	-5290Z	CRANFORD, JAMES MW-1	295600 / 902130	NEW ORLEANS AQ. SYS. / GORE	014	13S	21E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 1-15	0290	D	W

STD1

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP	SECT	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
089	-5291Z	CRANFORD, JAMES MW-2	295600 902130	NEW ORLEANS AQ. SYS. GORE	014	13S	21E	SURFICIAL CONFINING UNIT MONITOR	15 --	PLASTIC	4 1-15	0290	D	W
089	-5292Z	CRANFORD, JAMES MW-3	295600 902130	NEW ORLEANS AQ. SYS. GORE	014	13S	21E	SURFICIAL CONFINING UNIT MONITOR	15 --	8 PLASTIC	4 1-15	0290	D	W
089	-5293Z	CRANFORD, JAMES MW-4	295600 902130	NEW ORLEANS AQ. SYS. GORE	014	13S	21E	SURFICIAL CONFINING UNIT MONITOR	15 --	PLASTIC	4 1-15	0290	D	W
089	-5297Z	TRANSAMERICAN MW-1	295916 902324	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	65 --	2 PLASTIC	2 60-65	0787	D	W
089	-5298Z	TRANSAMERICAN MW-2	295916 902324	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 35-40	0787	D	W
089	-5299Z	TRANSAMERICAN MW2A	295916 902324	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 33-38	0190	D	W
089	-5300Z	TRANSAMERICAN MW-3	295916 902324	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 33-38	0787	D	W
089	-5301Z	TRANSAMERICAN MW-4	295916 902324	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	30 --	2 PLASTIC	2 23-28	0787	D	W
089	-5335Z	TRANSAMERICAN MW-13	295916 902324	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 35-40	0690	D	W
089	-5336Z	TRANSAMERICAN MW-14	295916 902324	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	45 --	2 PLASTIC	2 40-45	0690	D	W
089	-5337Z	TRANSAMERICAN MW-15	295916 902324	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	45 --	2 PLASTIC	2 40-45	0690	D	W
089	-5338Z	TRANSAMERICAN MW-1	295950 902330	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 35-40	0690	D	W
089	-5339Z	TRANSAMERICAN MW-2	295950 902330	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 35-40	0690	D	W
089	-5340Z	TRANSAMERICAN MW-3	295950 902330	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 35-40	0690	D	W
089	-5341Z	TRANSAMERICAN MW-4	295950 902330	NEW ORLEANS AQ. SYS. EUSTIS	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 35-40	0690	D	W
089	-5342Z	ORYX ENERGY MARSH 1	295449 901647	GRAMERCY AQUIFER GUICHARD	004	13S	22E	RIG SUPPLY	180 PA	4 PLASTIC	4 160-180	0690	D	W
089	-5343Z	TRANSAMERICAN MW-12	295916 902324	NEW ORLEANS AQ. SYS. UNKNOWN	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	40 PA	2				

STO1

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 11

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	TOWN SHIP	TOWN RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5345Z	BAXTER HEALTH MW-1	295633 902130	NEW ORLEANS AQ. SYS. PSI/PTL	005	12S	08E	SURFICIAL CONFINING UNIT MONITOR	17 --	2 PLASTIC	2 2-17	0190	D	W
089	-5346Z	BAXTER HEALTH MW-2	295633 902130	NEW ORLEANS AQ. SYS. PSI/PTL	005	12S	08E	SURFICIAL CONFINING UNIT MONITOR	17 --	2 PLASTIC	2 2-17	0190	D	W
089	-5347Z	BAXTER HEALTH MW-3	295633 902130	NEW ORLEANS AQ. SYS. PSI/PTL	005	12S	08E	SURFICIAL CONFINING UNIT MONITOR	17 --	2 PLASTIC	2 2-17	0190	D	W
089	-5348Z	RIVER PARISH OI MW-1	295656 902225	NEW ORLEANS AQ. SYS. PSI/PTL	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 3-15	0890	D	W
089	-5349Z	RIVER PARISH OI MW-2	295656 902225	NEW ORLEANS AQ. SYS. PSI/PTL	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 3-15	0890	D	W
089	-5350Z	RIVER PARISH OI MW-3	295656 902225	NEW ORLEANS AQ. SYS. PSI/PTL	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 3-15	0890	D	W
089	-5351Z	RIVER PARISH OI MW-4	295656 902225	NEW ORLEANS AQ. SYS. PSI/PTL	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 3-15	0890	D	W
089	-5352Z	MONSANTO TW-1	295528 902114	NEW ORLEANS AQ. SYS. ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	26 --	4 STEEL	4 21-26	0990	D	W
089	-5353Z	MONSANTO TW-2	295522 902117	NEW ORLEANS AQ. SYS. ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	26 --	4 STEEL	4 21-26	0990	D	W
089	-5354Z	MONSANTO TW-3	295521 902116	NEW ORLEANS AQ. SYS. ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	24 --	4 STEEL	4 19-24	0990	D	W
089	-5355Z	MONSANTO TW-4	295520 902118	NEW ORLEANS AQ. SYS. ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	24 --	4 STEEL	4 19-24	0990	D	W
089	-5356Z	MONSANTO TW-5	295520 902119	NEW ORLEANS AQ. SYS. ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	24 --	4 STEEL	4 19-24	0990	D	W
089	-5357Z	MONSANTO TW-6	295521 902119	NEW ORLEANS AQ. SYS. ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	24 --	4 STEEL	4 19-24	0990	D	W
089	-5358Z	MONSANTO TW-7	295521 902120	NEW ORLEANS AQ. SYS. ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	24 --	4 STEEL	4 19-24	0990	D	W
089	-5396Z	MONSANTO EW-1	295509 902115	NEW ORLEANS AQ. SYS. ZIMMERMAN	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	24 --	2 STEEL	2 19-24	1290	D	W
089	-5397Z	MONSANTO EW-2	295505 902117	NEW ORLEANS AQ. SYS. ZIMMERMAN	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 STEEL	2 14-20	1290	D	W
089	-5398Z	MONSANTO EW-3	295503 902119	NEW ORLEANS AQ. SYS. SEC DONOHUE	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	20 --	2 STEEL	2 15-20	1290	D	W

5101

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL	INFO
089	-5399Z	MONSANTO EW-4	295504 / 902121	NEW ORLEANS AQ. SYS. / ZIMMERMAN	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	36 / --	2 / STEEL	2 / 31-36	1290	D	W
089	-5400Z	MONSANTO EW-5	295506 / 902121	NEW ORLEANS AQ. SYS. / ZIMMERMAN	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	35 / --	2 / STEEL	2 / 30-35	1290	D	W
089	-5401Z	MONSANTO EW-6	295506 / 902120	NEW ORLEANS AQ. SYS. / SEC DONOHUE	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	35 / --	2 / STEEL	2 / 30-35	1290	D	W
089	-5402Z	MONSANTO EW-7	295507 / 902118	NEW ORLEANS AQ. SYS. / ZIMMERMAN	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	25 / --	4 / STEEL	4 / 20-25	1290	D	W
089	-5403Z	MONSANTO EW-8	295505 / 902119	NEW ORLEANS AQ. SYS. / ZIMMERMAN	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	20 / --	4 / STEEL	4 / 15-20	1290	D	W
089	-5404Z	MONSANTO EW-9	295505 / 902119	NEW ORLEANS AQ. SYS. / ZIMMERMAN	019	13S	21E	SURFICIAL CONFINING UNIT MONITOR	22 / --	4 / STEEL	4 / 17-22	1290	D	W
089	-5405Z	AMOCO OIL A	295657 / 902159	AQUIFER UNKNOWN / UNKNOWN	004	13S	08E	INDUSTRIAL	PA	24				
089	-5406Z	AMOCO OIL B	295657 / 902154	AQUIFER UNKNOWN / UNKNOWN	004	13S	08E	INDUSTRIAL	PA	12				
089	-5407Z	AMOCO OIL C	295657 / 902154	AQUIFER UNKNOWN / UNKNOWN	004	13S	08E	INDUSTRIAL	PA	12				
089	-5408Z	AMOCO OIL B-1-233	295720 / 902140	NEW ORLEANS AQ. SYS. / BRO BROTHERS	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	8 / PA	2		0590		
089	-5409Z	CLOVELLY OIL GATX 5	300012 / 902331	NORCO AQUIFER / BROWN, H.	007	12S	08E	RIG SUPPLY	405 / --	4 / PLASTIC	4 / 385-405	0692	D	W
089	-5410Z	SHELL OIL NMC 122	295940 / 902402	NEW ORLEANS AQ. SYS. / EUSTIS	006	12S	08E	SURFICIAL CONFINING UNIT MONITOR	25 / PA	4 / PLASTIC	4 / 20-25	0191	D	W
089	-5411Z	MONSANTO TW-8	295525 / 902119	NEW ORLEANS AQ. SYS. / ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	41 / --	2 / STEEL	2 / 36-41	0291	D	W
089	-5412Z	MONSANTO TW-9	295521 / 902117	NEW ORLEANS AQ. SYS. / ZIMMERMAN	063	13S	21E	SURFICIAL CONFINING UNIT MONITOR	42 / --	2 / STEEL	2 / 37-42	0291	D	W
089	-5416Z	CLOVELLY OIL GATX 1	295950 / 902307	NORCO AQUIFER / BROWN, H.	007	12S	08E	RIG SUPPLY	405 / --	4 / PLASTIC	4 / 385-405	0691	D	W
089	-5425Z	SHELL OIL NMC 132	300011 / 902353	NEW ORLEANS AQ. SYS. / EUSTIS	006	12S	08E	SURFICIAL CONFINING UNIT MONITOR	19 / --	4 / PLASTIC	4 / 9-19	0791	D	W
089	-5426Z	MONSANTO P-2	295614 / 902104	NEW ORLEANS AQ SYS. / UNKNOWN	020	13S	08E	SURFICIAL CONFINING UNIT MONITOR	40 / PA					

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATO ROUGE

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 13

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5435Z	AMOCO OIL B-1-I20	295724 902134	NEW ORLEANS AQ. SYS. LAYNE (BR)	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	27 --	2 PLASTIC	2 22-27	0390	D	W
089	-5436Z	AMOCO OIL B-1-I21	295721 902136	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	35 PA	2 PLASTIC	2 25-35	0390	D	W
089	-5437Z	AMOCO OIL B-1-I22	295726 902138	NEW ORLEANS AQ. SYS. LAYNE (BR)	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	27 PA	2 PLASTIC	2 22-27	0390	D	W
089	-5438Z	AMOCO OIL B-1-224	295718 902137	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0690	D	W
089	-5439Z	AMOCO OIL B-1-238	295722 902142	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0690	D	W
089	-5440Z	AMOCO OIL B-1-239	295725 902139	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0690	D	W
089	-5441Z	AMOCO OIL B-1-240	295720 902139	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	12 PA	2 PLASTIC	2 7-12	0690	D	W
089	-5442Z	AMOCO OIL B-2-9	295703 902143	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	7 PA	2 PLASTIC	2 2-7	0289	D	W
089	-5443Z	AMOCO OIL B-2-10	295704 902124	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	5 PA	2 PLASTIC	2 2-5	0289	D	W
089	-5444Z	AMOCO OIL B-2-I21	295724 902130	NEW ORLEANS AQ. SYS. LAYNE (BR)	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	25 --	2 PLASTIC	2 20-25	0390	D	W
089	-5445Z	AMOCO OIL B-2-50	295725 902131	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5446Z	AMOCO OIL B-2-51	295719 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0390	D	W
089	-5447Z	AMOCO OIL B-2-52	295718 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	8 PA	2 PLASTIC	2 3-8	0490	D	W
089	-5448Z	AMOCO OIL B-3-8	295711 902122	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	5 PA	2 PLASTIC	2 3-5	0289	D	W
089	-5449Z	AMOCO OIL B-3-I21	295711 902122	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	29 --	2 PLASTIC	2 24-29	0490	D	W
089	-5450Z	AMOCO OIL B-3-50	295704 902124	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5451Z	AMOCO OIL B-3-53	295711 902122	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	8 PA	2 PLASTIC	2 3-8	0390	D	W

STD1

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5452Z	AMOCO OIL B-3-54	295701 902123	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5453Z	AMOCO OIL B-3-55	295714 902125	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5454Z	AMOCO OIL B-3-56	295709 902118	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	8 PA	2 PLASTIC	2 3-8	0490	D	W
089	-5455Z	AMOCO OIL B-3-57	295704 902119	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	9 PA	2 PLASTIC	2 4-9	0490	D	W
089	-5456Z	AMOCO OIL B-3-252	295715 902128	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	8 PA	2 PLASTIC	2 3-8	0890	D	W
089	-5457Z	AMOCO OIL B-3-258	295608 902121	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0690	D	W
089	-5458Z	AMOCO OIL B-3-260	295710 902118	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	12 PA	2 PLASTIC	2 7-12	0690	D	W
089	-5459Z	AMOCO OIL B-4-4	295743 902124	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	5 PA	2 PLASTIC	2 1-5	0289	D	W
089	-5460Z	AMOCO OIL B-4-120	295742 902125	NEW ORLEANS AQ. SYS LAYNE (BR)	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	23 PA	2 PLASTIC	2 18-23	0290	D	W
089	-5461Z	AMOCO OIL B-5-5	295754 902118	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0289	D	W
089	-5462Z	AMOCO OIL B-5-6	295757 902118	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	5 PA	2 PLASTIC	2 2-5	0289	D	W
089	-5463Z	AMOCO OIL B-5-14	295745 902125	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	8 PA	2 PLASTIC	2 3-8	0289	D	W
089	-5464Z	AMOCO OIL B-5-121	295757 902118	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	30 --	2 PLASTIC	2 23-30	0490	D	W
089	-5465Z	AMOCO OIL B-5-51	295754 902118	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0490	D	W
089	-5466Z	AMOCO OIL B-5-52	295753 902121	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0490	D	
089	-5467Z	AMOCO OIL B-5-206	295757 902118	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	12 PA	2 PLASTIC	2 7-12	0590	D	W
089	-5468Z	AMOCO OIL B-5-207	295755 902119	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	10 --	2 PLASTIC	2 5-10	0590	D	W

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATO' ROUGE

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 15

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
089	-5469Z	AMOCO OIL B-5-208	295753 902130	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	9 PA	2 PLASTIC	2 4-9	0590	D	W
089	-5470Z	AMOCO OIL B-5-209	295753 902120	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	20 PA	2 PLASTIC	2 10-20	0590	D	W
089	-5471Z	AMOCO OIL B-5-210	295751 902122	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	20 PA	2 PLASTIC	2 10-20	0590	D	W
089	-5472Z	AMOCO OIL B-5-211	295751 902120	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	13 PA	2 PLASTIC	2 8-13	0590	D	W
089	-5473Z	AMOCO OIL B-5-212	295749 902123	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0590	D	W
089	-5474Z	AMOCO OIL B-5-213	295744 902124	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0590	D	W
089	-5475Z	AMOCO OIL B-5-214	295745 902125	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	13 --	2 PLASTIC	2 8-13	0590	D	W
089	-5476Z	AMOCO OIL B-5-215	295742 902123	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	16 PA	2 PLASTIC	2 11-16	0590	D	W
089	-5477Z	AMOCO OIL B-6-4	295733 902207	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2	0291	D	
089	-5478Z	AMOCO OIL B-6-I21	295733 902207	NEW ORLEANS AQ. SYS. LAYNE (BR)	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	26 PA	2 PLASTIC	2 21-26	0390	D	W
089	-5479Z	AMOCO OIL B-6-50	295733 902203	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0390	D	W
089	-5480Z	AMOCO OIL B-7-3	295708 902136	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0289	D	
089	-5481Z	AMOCO OIL B-7-4	295709 902135	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	8 PA	2 PLASTIC	2 3-8	0289	D	W
089	-5482Z	AMOCO OIL B-7-D21	295701 902128	DELTAIC DEPOSITS, YOUNGER LAYNE (BR)	004	13S	08E	MONITOR	55 --	2 PLASTIC	2 50-55	0390	D	W
089	-5483Z	AMOCO OIL B-7-I20	295709 902135	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	28 --	2 PLASTIC	2 23-28	0390	D	W
089	-5484Z	AMOCO OIL B-8-4	295715 902142	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	5 PA	2 PLASTIC	2 2-5	0289	D	W
089	-5485Z	AMOCO OIL B-8-50	295722 902145	NEW ORLEANS AQ. SYS. J & R DRILLING	015	12S	08E	SURFICIAL CONFINING UNIT MONITOR	9 --	2 PLASTIC	2 4-9	0390	D	W

STD.1

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL	INFO
089	-5486Z	AMOCO OIL C-2-1	295709 902153	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	1288	D	
089	-5487Z	AMOCO OIL C-2-2	295709 902153	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	1288	D	W
089	-5488Z	AMOCO OIL C-2-D20	295709 902154	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	53 --	2 PLASTIC	2 48-53	0390	D	W
089	-5489Z	AMOCO OIL C-2-I20	295709 902153	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	35 --	2 PLASTIC	2 30-35	0290		W
089	-5490Z	AMOCO OIL C-2-50	295711 902200	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5491Z	AMOCO OIL C-2-51	295708 902156	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5492Z	AMOCO OIL C-2-53	295703 902157	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5493Z	AMOCO OIL C-3-1	295720 902200	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5494Z	AMOCO OIL C-3-14	295724 902152	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5495Z	AMOCO OIL C-3-I20	295724 902152	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	30 --	2 PLASTIC	2 20-30	0390	D	W
089	-5496Z	AMOCO OIL C-3-I21	295716 902213	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	28 --	2 PLASTIC	2 23-28	0390	D	W
089	-5497Z	AMOCO OIL C-4-I20	295720 902144	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	30 --	2 PLASTIC	2 25-30	0390	D	W
089	-5498Z	AMOCO OIL C-4-D21	295711 902139	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	57 --	2 PLASTIC	2 47-57	0290	D	W
089	-5499Z	AMOCO OIL C-4-I21	295711 902139	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	35 --	2 PLASTIC	2 22-35	0290		W
089	-5500Z	AMOCO OIL C-5-4	295657 902202	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5501Z	AMOCO OIL C-5-D20	295651 902204	DELTAIC DEPOSITS, YOUNGER LAYNE (BR)	004	13S	08E	MONITOR	44 --	2 PLASTIC	2 34-44	0290	D	W
089	-5502Z	AMOCO OIL C-5-I20	295651 902204	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	27 --	2 PLASTIC	2 22-27	0290		W

STD1

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 17

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5503Z	AMOCO OIL C_6_12	295716 902213	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10		D	
089	-5504Z	AMOCO OIL C-6-I20	295708 902207	DELTAIC DEPOSITS, YOUNGER LAYNE (BR)	004	13S	08E	MONITOR	32 --	2 PLASTIC	2 27-32	0390	D	W
089	-5505Z	AMOCO OIL C-6-I21	295702 902200	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	35 --	2 PLASTIC	2 30-35	0290	D	W
089	-5506Z	AMOCO OIL C-6-I22	295657 902216	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	38 --	2 PLASTIC	2	0390	D	W
089	-5507Z	AMOCO OIL C-6-50	295702 902204	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 3-10	0390	D	W
089	-5508Z	AMOCO OIL C-6-51	295708 902207	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5509Z	AMOCO OIL D-1-2	295709 902153	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5510Z	AMOCO OIL D-1-I20	295706 902146	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	43 --	2 PLASTIC	2 33-43	0390	D	W
089	-5511Z	AMOCO OIL D-2-16	295700 902135	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5512Z	AMOCO OIL D-2-I20	295704 902141	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	35 --	2 PLASTIC	2 30-35	0390	D	W
089	-5513Z	AMOCO OIL D-2-I21	295702 902137	DELTAIC DEPOSITS, YOUNGER LAYNE (BR)	004	13S	08E	MONITOR	33 --	2 PLASTIC	2 28-33	0390	D	W
089	-5514Z	AMOCO OIL D-2-I22	295654 902135	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	34 --	2 PLASTIC	2 27-34	0390	D	W
089	-5515Z	AMOCO OIL D-2-D23	295700 902135	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	60 --	2 PLASTIC	2 52-60	0290	D	W
089	-5516Z	AMOCO OIL D-2-I23	295700 902135	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	38 --	2 PLASTIC	2 33-38	0390		W
089	-5517Z	AMOCO OIL D-2-50	295704 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	9 PA	2 PLASTIC	2 4-9	0390	D	W
089	-5518Z	AMOCO OIL D-3-I20	295704 902141	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	35 --	2 PLASTIC	2 25-35	0390	D	W
089	-5519Z	AMOCO OIL D-3-I21	295654 902138	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	34 --	2 PLASTIC	2 24-34	0390	D	W

STD1

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5520Z	AMOCO OIL D-3-122	295650 902138	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	CONFINING UNIT MONITOR	35 --	2 PLASTIC	2 25-35	0390	D	W
089	-5521Z	AMOCO OIL D-3-50	295655 902135	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	CONFINING UNIT MONITOR	6 PA	2 PLASTIC	2 4-6	0490		W
089	-5522Z	AMOCO OIL D-3-52	295655 902135	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5523Z	AMOCO OIL D-3-53	295654 902136	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	13 PA	2 PLASTIC	2 7-13	0390	D	W
089	-5524Z	AMOCO OIL D-3-54	295653 902136	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 --	2 PLASTIC	2 5-10	0390	D	W
089	-5525Z	AMOCO OIL D-3-55	295651 902137	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	9 PA	2 PLASTIC	2 4-9	0390	D	W
089	-5526Z	AMOCO OIL D-3-56	295652 902138	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5527Z	AMOCO OIL D-3-201	295651 902137	DELTAIC DEPOSITS, YOUNGER J & R DRILLING	004	13S	08E	MONITOR	67 --	2 PLASTIC	2 57-67	0590	D	W
089	-5528Z	AMOCO OIL D-3-204	295654 902136	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0590	D	W
089	-5529Z	AMOCO OIL D-3-205	295653 902136	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	13 PA	2 PLASTIC	2 5-13	0590	D	W
089	-5530Z	AMOCO OIL D-3-206	295652 902136	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	13 PA	2 PLASTIC	2 8-13	0590	D	W
089	-5531Z	AMOCO OIL D-3-207	295652 902137	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	14 PA	2 PLASTIC	2 9-14	0590	D	W
089	-5532Z	AMOCO OIL D-3-208	295651 902139	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	12 PA	2 PLASTIC	2 7-12	0590	D	W
089	-5533Z	AMOCO OIL D-4-5	295649 902137	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5534Z	AMOCO OIL D-4-6	295655 902146	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0188	D	W
089	-5535Z	AMOCO OIL D-5-1A	295704 902150	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0188	D	W
089	-5536Z	AMOCO OIL D-5-15	295654 902144	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W

STD1

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 19

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5537Z	AMOCO OIL D-5-D2O	295651 902204	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	CONFINING UNIT MONITOR	59 --	2 PLASTIC	2 49-59	0290	D	W
089	-5538Z	AMOCO OIL D-5-I2O	295658 902149	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	CONFINING UNIT MONITOR	40 --	2 PLASTIC	2 30-40	0290		W
089	-5539Z	AMOCO OIL D-5-I21	295655 902145	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	CONFINING UNIT MONITOR	47 --	2 PLASTIC	2 37-47	0290	D	W
089	-5540Z	AMOCO OIL D-5-51	295656 902150	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	13 --	2 PLASTIC	2 3-13	0390	D	W
089	-5541Z	AMOCO OIL D-5-52	295654 902150	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	14 PA	2 PLASTIC	2 4-14	0390	D	W
089	-5542Z	AMOCO OIL D-7-10	295701 902144	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	5 PA	2 PLASTIC	2 2-5	0189	D	W
089	-5543Z	AMOCO OIL D-7-11	295652 902153	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	5 PA	2 PLASTIC	2 2-5	0189	D	W
089	-5544Z	AMOCO OIL D-7-12	295701 902144	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0188	D	W
089	-5545Z	AMOCO OIL D-7-I21	295704 902150	NEW ORLEANS AQ. SYS LAYNE (BR)	004	13S	08E	CONFINING UNIT MONITOR	38 --	2 PLASTIC	2 30-37	0390	D	W
089	-5546Z	AMOCO OIL D-8-4	295651 902139	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0188	D	W
089	-5547Z	AMOCO OIL D-8-5	295655 902138	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5548Z	AMOCO OIL D-9-I21	295642 902143	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	CONFINING UNIT MONITOR	36 --	2 PLASTIC	2 21-36	0390	D	W
089	-5549Z	AMOCO OIL E-1-7	295648 902135	NEW ORLEANS AQ. SYS J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5550Z	AMOCO OIL E1-8	295642 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5551Z	AMOCO OIL E-1-9	295642 902143	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5552Z	AMOCO OIL E-1-I2O	295642 902132	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	CONFINING UNIT MONITOR	30 --	2 PLASTIC	2 20-30	0390	D	W
089	-5553Z	AMOCO OIL E-2-11	295656 902128	NEW ORLEANS AQ. SYS J & R DRILLING	004	13S	08E	CONFINING UNIT MONITOR	10 --	2 PLASTIC	2 5-10	0189	D	W

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
089	-5554Z	AMOCO OIL E-2-I20	295642 902132	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	34 --	2 PLASTIC	2 24-34	0490	D	W
089	-5555Z	AMOCO OIL E-2-I21	295656 902132	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	34 PA	2 PLASTIC	2 24-34	0390	D	W
089	-5556Z	AMOCO OIL E-2-I22	295652 902130	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	34 --	2 PLASTIC	2 26-33	0390	D	W
089	-5557Z	AMOCO OIL E-2-I23	295653 902134	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	40 PA	2 PLASTIC	2 30-40	0490	D	W
089	-5558Z	AMOCO OIL E-2-I24	295651 902135	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	30 PA	2 PLASTIC	2 20-30	0390	D	W
089	-5559Z	AMOCO OIL E-2-50	295656 902133	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5560Z	AMOCO OIL E-2-51	295656 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 13-15	0390	D	W
089	-5561Z	AMOCO OIL E-2-52	295654 902130	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5562Z	AMOCO OIL E-2-53	295652 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	15 PA	2 PLASTIC	2 10-15	0390	D	W
089	-5563Z	AMOCO OIL E-2-54	295650 902134	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	8 PA	2 PLASTIC	2 3-8	0390	D	W
089	-5564Z	AMOCO OIL E-2-55	295651 902135	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5565Z	AMOCO OIL E-2-59	295647 902134	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 4-10	0390	D	W
089	-5566Z	AMOCO OIL E-2-60	295646 902134	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0390	D	W
089	-5567Z	AMOCO OIL E-2-201	295653 902134	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	78 PA	2 PLASTIC	2 73-78	0690	D	W
089	-5568Z	AMOCO OIL E-2-202	295651 902135	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	60 PA	2 PLASTIC	2 50-60	0690	D	W
089	-5569Z	AMOCO OIL E-2-203	295656 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	78 PA	2 PLASTIC	2 66-78	0590	D	W
089	-5570Z	AMOCO OIL E-2-212	295652 902134	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	12 PA	2 PLASTIC	2 7-12	0590	D	W

STO1

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 21

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
089	-5571Z	AMOCO OIL E-2-214	295653 902135	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	12 PA	2 PLASTIC	2 7-12	0590	D	W
089	-5572Z	AMOCO OIL E-2-215	295653 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	13 PA	2 PLASTIC	2 8-13	0590	D	W
089	-5573Z	AMOCO OIL E-2-216	295654 902133	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	13 PA	2 PLASTIC	2 8-13	0590	D	W
089	-5574Z	AMOCO OIL E-2-217	295654 902133	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	14 PA	2 PLASTIC	2 4-14	0590	D	W
089	-5575Z	AMOCO OIL E-2-218	295651 902135	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	12 PA	2 PLASTIC	2 7-12	0590	D	W
089	-5576Z	AMOCO OIL E-2-219	295656 902133	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	13 PA	2 PLASTIC	2 5-13	0590	D	W
089	-5577Z	AMOCO OIL E-2-220	295655 902132	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	13 PA	2 PLASTIC	2 5-13	0590	D	W
089	-5578Z	AMOCO OIL E-2-222	295656 902128	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	12 PA	2 PLASTIC	2 7-12	0590	D	W
089	-5579Z	AMOCO OIL E-2-223	295652 902133	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0690	D	W
089	-5580Z	AMOCO OIL E-3-4	295654 902129	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5581Z	AMOCO OIL E-3-5	295643 902134	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	5 PA			0189	D	W
089	-5582Z	AMOCO OIL E-3-120	295656 902128	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	34 --	2 PLASTIC	2 27-34	0490	D	W
089	-5583Z	AMOCO OIL E-3-D21	295656 902123	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	60 --	2 PLASTIC	2 54-60	0490	D	W
089	-5584Z	AMOCO OIL E-3-121	295656 902123	NEW ORLEANS AQ. SYS. LAYNE (BR)	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	34 --	2 PLASTIC	2 24-34	0490		W
089	-5585Z	AMOCO OIL O-2-13	295702 902137	NEW ORLEANS AQ. SYS. J & R DRILLING	004	13S	08E	SURFICIAL CONFINING UNIT MONITOR	10 PA	2 PLASTIC	2 5-10	0189	D	W
089	-5656Z	SHELL OIL NMC 66	300010 902355	NEW ORLEANS AQ. SYS. UNKNOWN	006	12S	08E	SURFICIAL CONFINING UNIT MONITOR	13 --	4 PLASTIC	4 3-13			
089	-5681Z	NO INT AIRPORT PZ-5A	295947 901649	NEW ORLEANS AQ. SYS. GORE	039	12S	09E	SURFICIAL CONFINING UNIT PIEZOMETER	20 --	0.50 PLASTIC	0.50 17-20	0493	D	W

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
089	-5682Z	NO INT AIRPORT PZ-11	295950 901649	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	20 --	0.50 PLASTIC	0.50 17-20	0493	D	W
089	-5683Z	NO INT AIRPORT PZ-12	295950 901649	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	15 --	0.50 PLASTIC	0.50 12-15	0493	D	W
089	-5684Z	NO INT AIRPORT PZ-13	295950 901651	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	12 --	0.50 PLASTIC	0.50 9-12	0493	D	W
089	-5685Z	NO INT AIRPORT PZ-14	295950 901652	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
089	-5686Z	NO INT AIRPORT PZ-16	295951 901649	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
089	-5687Z	NO INT AIRPORT PZ-19	295941 901649	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	20 --	0.50 PLASTIC	0.50 17-20	0493	D	W
089	-5688Z	NO INT AIRPORT PZ-25	295945 901649	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	20 --	0.50 PLASTIC	0.50 17-20	0493	D	W
089	-5689Z	NO INT AIRPORT PZ-26	295945 901649	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	15 --	0.50 PLASTIC	0.50 12-15	0493	D	W
089	-5690Z	NO INT AIRPORT PZ-27	295945 901651	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
089	-5691Z	NO INT AIRPORT PZ-28	295945 901652	NEW ORLEANS AQ. GORE	SYS. 039	SURFICIAL 12S	CONFINING UNIT 09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
089	-5711Z	MONSANTO EW-12	295507 902122	NEW ORLEANS AQ. EUSTIS	SYS 019	SURFICIAL 13S	CONFINING UNIT 21E	MONITOR	23 --	2 PLASTIC	2 18-23	0693	D	W
089	-5712Z	MONSANTO EW-13	295505 902120	NEW ORLEANS AQ. EUSTIS	SYS. 019	SURFICIAL 13S	CONFINING UNIT 21E	MONITOR	51 --	2 PLASTIC	2 41-51	0693	D	W
089	-5714Z	SANDAIR CORP MW-1	295819 901824	NEW ORLEANS AQ. ANTHON	SYS. 040	SURFICIAL 12S	CONFINING UNIT 09E	MONITOR	12 --	2 PLASTIC	2 7-12	0194	D	W
089	-5715Z	SANDAIR CORP MW-2	295819 901824	NEW ORLEANS AQ. ANTHON	SYS. 040	SURFICIAL 12S	CONFINING UNIT 09E	MONITOR	12 --	2 PLASTIC	2 7-12	0194	D	W
089	-5716Z	PHILBRO MW-1	295701 901950	NEW ORLEANS AQ. LAYNE (ENV)	SYS. 040	SURFICIAL 13S	CONFINING UNIT 09E	MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5717Z	PHILBRO MW-2	295701 901949	NEW ORLEANS AQ. LAYNE (ENV)	SYS. 040	SURFICIAL 13S	CONFINING UNIT 09E	MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5718Z	PHILBRO MW-3	295701 901947	NEW ORLEANS AQ. LAYNE (ENV)	SYS. 040	SURFICIAL 13S	CONFINING UNIT 09E	MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 23

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5719Z	PHILBRO MW-4	295702 901944	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5720Z	PHILBRO MW-5	295703 901945	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5721Z	PHILBRO MW-6	295704 901943	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5722Z	PHILBRO MW-7	295706 901943	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5723Z	PHILBRO MW-8	295707 901944	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5724Z	PHILBRO MW-9	295706 901947	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5725Z	PHILBRO MW-10	295705 901945	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5726Z	PHILBRO MW-11	295706 901948	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5727Z	PHILBRO MW-12	295704 901950	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5728Z	PHILBRO MW-13	295701 901950	NEW ORLEANS AQ. SYS. LAYNE (ENV)	040	13S	09E	SURFICIAL CONFINING UNIT MONITOR	25 PA	2 PLASTIC	2 5-25	1293	D	W
089	-5734Z	IMTT MW-A1	295630 901946	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5735Z	IMTT MW-A2	295630 901944	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5736Z	IMTT MW-A3	295631 901946	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5737Z	IMTT MW-C1	295637 901952	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5738Z	IMTT MW-C2	295638 901948	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5739Z	IMTT MW-C3	295637 901948	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5740Z	IMTT MW-E1	295634 901940	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM
WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER
(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)
WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
089	-5741Z	IMTT MW-E2	295634 901940	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5742Z	IMTT MW-E3	295634 901940	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5743Z	IMTT MW-F1	295649 901951	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5744Z	IMTT MW-F2	295650 901952	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5745Z	IMTT MW-F3	295649 901952	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0194	D	W
089	-5746Z	IMTT MW-H1	295650 901951	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0294	D	W
089	-5747Z	IMTT MW-H2	295649 901952	NEW ORLEANS AQ. SYS. LAYNE (ENV)	039	13S	09E	SURFICIAL CONFINING UNIT MONITOR	15 --	4 PLASTIC	4 5-15	0294	D	W
089	-5754Z	UNIV MATCH CORP MW-1	295830 901657	NEW ORLEANS AQ. SYS. EUSTIS	039	12S	09E	SURFICIAL CONFINING UNIT MONITOR	10 --	2 PLASTIC	2 5-10	0394	D	W
089	-5755Z	UNIV MATCH CORP MW-2	295826 901655	NEW ORLEANS AQ. SYS. EUSTIS	039	12S	09E	SURFICIAL CONFINING UNIT MONITOR	10 --	2 PLASTIC	2 5-10	0394	D	W
089	-5770Z	AMOCO OIL MW-2S	295653 902127	NEW ORLEANS AQ. SYS. MONITOR	005	13S	08E	SURFICIAL CONFINING UNIT MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5771Z	AMOCO OIL MW-3IN	295653 902127	NEW ORLEANS AQ. SYS. MONITOR	005	13S	08E	SURFICIAL CONFINING UNIT MONITOR	30 --	2 PLASTIC	2 20-30	0494	D	W
089	-5772Z	AMOCO OIL MW-4S	295653 902127	NEW ORLEANS AQ. SYS. MONITOR	005	13S	08E	SURFICIAL CONFINING UNIT MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5773Z	AMOCO OIL MW-5I	295653 902127	NEW ORLEANS AQ. SYS. MONITOR	005	13S	08E	SURFICIAL CONFINING UNIT MONITOR	32 --	2 PLASTIC	2 22-32	0494	D	W
089	-5774Z	AMOCO OIL MW-6S	295653 902127	NEW ORLEANS AQ. SYS. MONITOR	005	13S	08E	SURFICIAL CONFINING UNIT MONITOR	20 --	2 PLASTIC	2 10-20	0494	D	W
089	-5775Z	AMOCO OIL MW-7I	295653 902127	NEW ORLEANS AQ. SYS. MONITOR	005	13S	08E	SURFICIAL CONFINING UNIT MONITOR	32 --	2 PLASTIC	2 22-32	0494	D	W
089	-5776Z	AMOCO OIL MW-8S	295653 902127	NEW ORLEANS AQ. SYS. MONITOR	005	13S	08E	SURFICIAL CONFINING UNIT MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5777Z	AMOCO OIL MW-10S	295653 902127	NEW ORLEANS AQ. SYS. MONITOR	005	13S	08E	SURFICIAL CONFINING UNIT MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W

STDS

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATO' ROUGE

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 25

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5778Z	AMOCO OIL MW-12S	295653 902127	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT MONITOR	005	13S	08E	MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5779Z	AMOCO OIL MW-16S	295653 902127	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT MONITOR	005	13S	08E	MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5780Z	AMOCO OIL MW-18S	295705 902148	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT MONITOR	004	13S	08E	MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5781Z	AMOCO OIL MW-20S	295708 902203	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT MONITOR	004	13S	08E	MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5782Z	AMOCO OIL MW-21I	295708 902127	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT MONITOR	004	13S	08E	MONITOR	34 --	2 PLASTIC	2 24-34	0494	D	W
089	-5783Z	AMOCO OIL MW-25S	295725 902210	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT MONITOR	004	13S	08E	MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5784Z	AMOCO OIL MW-41I	295725 902125	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT MONITOR	016	12S	08E	MONITOR	36 --	2 PLASTIC	2 26-36	0494	D	W
089	-5785Z	AMOCO OIL MW-42S	295745 902125	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT MONITOR	005	13S	08E	MONITOR	14 --	2 PLASTIC	2 4-14	0494	D	W
089	-5800Z	AMOCO OIL MW-27S	295716 902142	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT PROFESSIONAL	004	13S	08E	MONITOR	14 --	2 PLASTIC	2 4-14	0994	D	W
089	-5801Z	AMOCO OIL MW-33S	295717 902139	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT PROFESSIONAL	004	13S	08E	MONITOR	14 --	2 PLASTIC	2 4-14	0994	D	W
089	-5802Z	AMOCO OIL OW-51I	295639 902132	NEW ORLEANS AQ. SYS SURFICIAL CONFINING UNIT PROFESSIONAL	004	13S	08E	MONITOR	30 --	2 PLASTIC	2 20-30	0994	D	W
089	-5803Z	E-Z MART MW-1	295441 902108	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT J.E.I.	021	13S	21E	MONITOR	17 --	4 PLASTIC	4 2-17	0994	D	W
089	-5804Z	E-Z MART MW-2	295440 902107	NEW ORLEANS AQ. SYS SURFICIAL CONFINING UNIT J.E.I.	021	13S	21E	MONITOR	14 --	4 PLASTIC	4 2-14	0994	D	W
089	-5805Z	E-Z MART MW-3	295441 902107	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT J.E.I.	021	13S	21E	MONITOR	15 --	4 PLASTIC	4 2-15	0994	D	W
089	-5806Z	E-Z MART MW-4	295440 902106	NEW ORLEANS AQ. SYS SURFICIAL CONFINING UNIT J.E.I.	021	13S	21E	MONITOR	15 --	4 PLASTIC	4 2-15	0994	D	W
089	-5807Z	E-Z MART MW-5	295440 902107	NEW ORLEANS AQ. SYS. SURFICIAL CONFINING UNIT J.E.I.	021	13S	21E	MONITOR	15 --	4 PLASTIC	4 2-15	0994	D	W
089	-5808Z	E-Z MART MW-6	295441 902107	NEW ORLEANS AQ. SYS SURFICIAL CONFINING UNIT J.E.I.	021	13S	21E	MONITOR	10 --	4 PLASTIC	4 2-10	0994	D	W

STD1

6/05/95

LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL	INFO
089	-5812Z	GATX TERMINALS MW-1	295933 902319	NEW ORLEANS AQ. SYS. GRINER	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	28 --	2 PLASTIC	2 18-28	1194	D	W
089	-5813Z	GATX TERMINALS MW-2	295933 902319	NEW ORLEANS AQ. SYS. GRINER	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	26 --	2 PLASTIC	2 16-26	1194	D	W
089	-5814Z	GATX TERMINALS MW-3	295931 902329	NEW ORLEANS AQ. SYS. GRINER	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	19 --	2 PLASTIC	2 9-19	1194	D	W
089	-5815Z	GATX TERMINALS MW-4	295925 902325	NEW ORLEANS AQ. SYS. GRINER	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	26 --	2 PLASTIC	2 16-26	1194	D	W
089	-5816Z	GATX TERMINALS MW-5	295924 902329	NEW ORLEANS AQ. SYS. GRINER	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	32 --	2 PLASTIC	2 22-32	1094	D	W
089	-5817Z	GATX TERMINALS MW-6	295927 902321	NEW ORLEANS AQ. SYS. GRINER	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	32 --	2 PLASTIC	2 22-32	1194	D	W
089	-5818Z	GATX TERMINALS MW-7	295938 902320	NEW ORLEANS AQ. SYS. GRINER	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	100 --	2 PLASTIC	2 90-100	1194	D	W
089	-5819Z	GATX TERMINALS MW-8	295936 902322	NEW ORLEANS AQ. SYS. GRINER	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	32 --	2 PLASTIC	2 22-32	1194	D	W
089	-5820Z	APACHE CORP G PIPELN 1	295702 902026	NORCO AQUIFER RIG WATER	041	13S	09E	RIG SUPPLY	390 --	4 PLASTIC	4 370-390	0295	D	W
089	-5821Z	GATX TERMINALS MW-7	295941 902322	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5822Z	GATX TERMINALS MW-8	295940 902323	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5823Z	GATX TERMINALS MW-9	295942 902325	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5824Z	GATX TERMINALS MW-10	295943 902320	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5825Z	GATX TERMINALS MW-11	295945 902321	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5826Z	GATX TERMINALS MW-12	295943 902323	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5827Z	GATX TERMINALS MW-13	295943 902325	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5828Z	GATX TERMINALS MW-14	295945 902322	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W

STD1

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATOI ROUGE

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 27

WELLRQ1A - REGISTERED WATER WELLS IN ST CHARLES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
089	-5829Z	GATX TERMINALS MW-15	295945 902325	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5830Z	GATX TERMINALS MW-16	295939 902326	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5831Z	GATX TERMINALS MW-17	295937 902328	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5832Z	GATX TERMINALS MW-18	295938 902329	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5833Z	GATX TERMINALS MW-19	295939 902328	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5834Z	GATX TERMINALS MW-20	295940 902329	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5835Z	GATX TERMINALS MW-21	295939 902331	NEW ORLEANS AQ. SYS. G & E	007	12S	08E	SURFICIAL CONFINING UNIT MONITOR	21 --	2 PLASTIC	2 1-21	0195	D	W
089	-5842Z	E-Z MART MW-7	295442 902107	NEW ORLEANS AQ. SYS. J.E.I.	021	13S	21E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0595	D	W

NUMBER OF WELLS SELECTED IN PARISH = 450

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATO' ROUGE

WELL0040 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 1
DATE: 06/05/95 WATER WELL REPORT SELECTION CRITERIA

		PARISH BOUNDARIES MAX-N	MIN-S	MIN-E	MAX-W
PARISH(ES) REQUESTED :	075 - PLAQUEMINES	295417	285433	885726	900431

USES REQUESTED : ALL - ALL USES

AQUIFERS REQUESTED : ALL - ALL AQUIFERS

WITHIN A 1.0000 MILE RADIUS OF LATITUDE 295312 LONGITUDE 895903

COMMENTS : (HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

NUMBER OF RECORDS SELECTED = 1

ATTN: Ms. Barbara Bossier

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATO' ROUGE

6/05/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 1

WELLRQ1A - REGISTERED WATER WELLS IN PLAQUEMINES -- SORTED BY WELL NUMBER

(HARTMAN ENGINEERING, INC./PROJECT NO.071-04-ESTE)

WITHIN A 1.0000 MILE RADIUS OF LATITUDE 295312 LONGITUDE 895903

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
075	- 22	U S NAVY	295335 895840	GONZALES-NEW ORLEANS AQUIFER BLAKEMORE A	007	14S	25E	PUBLIC SUPPLY	800 -A	14		1944	D W

NUMBER OF WELLS SELECTED IN PARISH = 1

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATO ROUGE

WELL0040 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 1
DATE: 06/05/95 WATER WELL REPORT SELECTION CRITERIA

		PARISH BOUNDARIES MAX-N	MIN-S	MIN-E	MAX-W
PARISH(ES) REQUESTED :	089 - ST CHARLES	300451	294130	901002	903258
USES REQUESTED :	ALL - ALL USES				
AQUIFERS REQUESTED :	ALL - ALL AQUIFERS				

WITHIN A 6.0000 MILE RADIUS OF LATITUDE 295730 LONGITUDE 901845

COMMENTS : (HARTMAN ENGINEERING, INC /PROJECT NO 071-04-ESTE)

NUMBER OF RECORDS SELECTED = 450

ATTN: Ms. Barbara Bossier

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

5/18/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 1

WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO
051	- 1	CRISTINA ICE SR 901437	295835 901437	NORCO AQUIFER BLAKEMORE A	042	12S	08E	INDUSTRIAL	460 -A	8	8 400-460	1930	Q W
051	- 2	JF SCHOOL BOARD 901508	295828 901508	GONZALES-NEW ORLEANS AQUIFER BLAKEMORE A	037	12S	09E	PUBLIC SUPPLY	700 -D	6		1932	
051	- 3	CRISTINA, J P 901257	295829 901257	GONZALES-NEW ORLEANS AQUIFER SELLERS	039	12S	10E	DOMESTIC	780 -A	2	2 740-780	1139	E Q W
051	- 4	FOLSE, E J 900602	295314 900602	NORCO AQUIFER ROUSSEL D	004	14S	23E	DOMESTIC	585 -D	2	2 545-585	1930	Q
051	- 5	CRISTINA ICE SR 900603	295356 900603	GRAMERCY AQUIFER UNKNOWN	019	13S	23E	INDUSTRIAL	350 -A	8		1936	Q
051	- 6	PUB BELT RR COM 900958	295543 900958	GONZALES-NEW ORLEANS AQUIFER BLAKEMORE A	002	13S	23E	INDUSTRIAL	764 -A	3X2 STEEL		1033	E Q W
051	- 6A	PUB BELT RR COM 900958	295543 900958	GRAMERCY AQUIFER BLAKEMORE A	002	13S	23E	INDUSTRIAL	150 -A	3X2 STEEL		1033	E Q W
051	- 7	JF DRAINAGE DIS 901051	300114 901051	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	044	12S	10E	INDUSTRIAL	700 -D	4			Q W
051	- 8	LR BASIN LV DST 900355	295508 900355	GONZALES-NEW ORLEANS AQUIFER BLAKEMORE A	005	13S	24E	OTHER	825 -D	6	6 765-825		Q W
051	- 9	AMER CREOSOTE 900820	295728 900820	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	038	12S	11E	INDUSTRIAL	750 -D	6		1914	Q
051	- 10	ARMOUR FERT WRK 900933	295804 900933	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	046	12S	10E	INDUSTRIAL	800 99	8		1900	Q W
051	- 11	PENDLETON TERM 900827	295453 900827	GONZALES-NEW ORLEANS AQUIFER BLAKEMORE A	039	13S	23E	PUBLIC SUPPLY	800 -A	6	6 720-800	0242	Q
051	- 12	JF DRAINAGE DIS 900843	300104 900843	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	051	12S	10E	INDUSTRIAL	880 -D	4		1926	W
051	- 13	COM SOLVENTS CO 900528	295428 900528	GONZALES-NEW ORLEANS AQUIFER BLAKEMORE A	022	13S	23E	INDUSTRIAL	780 99	12 METAL	8 700-780	1925	Q W
051	- 14	COM SOLVENTS CO 900530	295427 900530	GONZALES-NEW ORLEANS AQUIFER BLAKEMORE A	022	13S	23E	INDUSTRIAL	800 -A	12	720-800	1930	Q W
051	- 15	AMER CREOSOTE 900819	295729 900819	GONZALES-NEW ORLEANS AQUIFER BLAKEMORE A	038	12S	11E	INDUSTRIAL	800 -D	6	780-800	0143	Q W
051	- 16	LR BASIN LV DST 900355	295508 900355	GRAMERCY AQUIFER UNKNOWN	005	13S	24E	OTHER	900 -D	10		1943	Q

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5/18/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 2

WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	- 17	PUBLICKER CHEM	295813	GONZALES-NEW ORLEANS AQUIFER					800	12			Q
			900347	BLAKEMORE A	006	13S	24E	INDUSTRIAL	-D				
051	- 18	PUBLICKER CHEM	295510	GONZALES-NEW ORLEANS AQUIFER					782	12X10	8	1943	Q W
		2	900341	CARLOSS	007	13S	24E	INDUSTRIAL	99		694-782		
051	- 19	PUBLICKER CHEM	295513	GONZALES-NEW ORLEANS AQUIFER					780	12	8	0643	Q
		1	900342	CARLOSS	007	13S	24E	INDUSTRIAL	99		690-780		
051	- 20	PUBLICKER CHEM	295549	GONZALES-NEW ORLEANS AQUIFER					800	12X10		1943	Q W
		2	900847	BLAKEMORE A	006	13S	23E	INDUSTRIAL	-A				
051	- 21	PUBLICKER CHEM	295551	GONZALES-NEW ORLEANS AQUIFER					800	12X8	8	0942	E Q W
		1	900846	BLAKEMORE A	006	13S	23E	INDUSTRIAL	99		720-800		
051	- 22	COLLENBERG, S N	295700	POINT-BAR DEPOSITS					59	2X2	2	0947	W
			900901	RILEY DRLG	005	13S	23E	DOMESTIC	-A		49-59		
051	- 23	MARRERO LAND	295542	GRAMERCY AQUIFER					202	2	2	0149	DMQ W
			901032	RILEY DRLG	001	13S	23E	DOMESTIC	-A		192-202		
051	- 24	NEW ORLEANS P S	295908	NO WELL MADE, LOG DEPTH SHOWN					845			0450	DM
			901528	DEEPWELL CO	037	12S	09E	TEST HOLE	PA				
051	- 24A	NEW ORLEANS P S	295908	GONZALES-NEW ORLEANS AQUIFER					708	6X4	4	0550	ED Q W
		1	901528	DEEPWELL CO	037	12S	09E	TEST HOLE	PA		678-708		
051	- 25	LA POWER &LIGHT	295647	GONZALES-NEW ORLEANS AQUIFER					878	12X10X8		0949	D Q PW
		1	900845	LAYNE (LA)	006	13S	23E	POWER GENERAT.	--		754-875		
051	- 26	FRABIALE, JOHN	300026	GRAMERCY AQUIFER					185	2		0250	Q W
			901427	UNKNOWN	038	12S	10E	DOMESTIC	-D				
051	- 27	LOUVIER, R A	295949	GRAMERCY AQUIFER					200	2		1948	W
			901434	A & M DRLG	038	12S	10E	DOMESTIC	-A				
051	- 28	LA POWER &LIGHT	295643	GONZALES-NEW ORLEANS AQUIFER					807	12X8	8	1149	D Q PW
			900847	LAYNE (LA)	006	13S	23E	INDUSTRIAL	99		686-807		
051	- 29	LA BOX CO	295831	GONZALES-NEW ORLEANS AQUIFER					760	6		0742	Q W
			901543	BLAKEMORE A	037	12S	09E	INDUSTRIAL	99		680-760		
051	- 30	GEORGE, ROBERT	295654	SHALLOW AQUIFERS OF NEW ORLEANS AREA					158	2		0650	D Q W
			900906	RILEY DRLG	005	13S	23E	DOMESTIC	-A		148-158		
051	- 31	NO AVIATION BD	295908	GONZALES-NEW ORLEANS AQUIFER					720	10X8	8	0750	EDMQ PW
		3	901528	COASTAL WTR	037	12S	09E	INDUSTRIAL	99	STEEL	640-720		
051	- 32	ED MARTIN SEAFD	295452	GRAMERCY AQUIFER					240	8		1922	W
			900836	UNKNOWN	039	13S	23E	INDUSTRIAL	-A				

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

5/18/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 3

WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	- 33	CUTCHER CAN CO	295459 900832	GRAMERCY AQUIFER BURLEIGH C C	008	13S	23E	OBSERVATION	290 -A	8	4 250-280	0750	Q W
051	- 34	HUNT-WESSON FOO	295454 900412	GONZALES-NEW ORLEANS AQUIFER LAYNE (LA)	003	13S	24E	INDUSTRIAL	807 99	12X8	8 724-807	0446	ED Q W
051	- 35	S SHELLFISH CO 1	295420 900458	GRAMERCY AQUIFER LAYNE (LA)	001	13S	24E	INDUSTRIAL	270 -A	10X6	6 228-270	0749	ED Q PW
051	- 36	WEAVER, S J	300115 901025	NORCO AQUIFER RUBB	045	12S	10E	DOMESTIC	454 --	2	434-454	1947	Q
051	- 37	RHEEM MFG CO	295722 901045	GONZALES-NEW ORLEANS AQUIFER MENGE	044	13S	10E	INDUSTRIAL	787 PA	16X12	10 688-787	0453	ED Q W
051	- 38	U S STEEL CORP	295624 901117	GONZALES-NEW ORLEANS AQUIFER MENGE	041	13S	10E	INDUSTRIAL	725 -D	6X4	4 685-725	1952	D Q W
051	- 39	CUTCHER CAN CO	295500 900831	GRAMERCY AQUIFER MENGE	039	13S	23E	INDUSTRIAL	241 -A	8X6	6 211-241	0852	D Q W
051	- 40	SCHWEGMANN 1	295830 900903	GONZALES-NEW ORLEANS AQUIFER MENGE	046	12S	10E	INDUSTRIAL	810 -I	6		1950	Q
051	- 41	SCHWEGMANN 2	295831 900904	GONZALES-NEW ORLEANS AQUIFER MENGE	046	12S	10E	INDUSTRIAL	728 -I	8X6X6	6 688-728	0554	D Q
051	- 42	CRISTINA ICE SR 2	295358 900603	GRAMERCY AQUIFER BLAKEMORE A	019	13S	23E	INDUSTRIAL	282 -A	8	242-282	1946	E Q W
051	- 43	LA POWER &LIGHT 3	295655 900849	GRAMERCY AQUIFER CARLOSS	055	13S	23E	POWER GENERAT.	835 --	12X8	6 708-835	1161	EDMQ PW
051	- 44	JOHNS-MANVILLE 1	295407 900642	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	016	13S	23E	INDUSTRIAL	788 99	12X8X6	6 MULTIPLE	0953	ED Q W
051	- 45	JOHNS-MANVILLE 2	295406 900654	GONZALES-NEW ORLEANS AQUIFER LAYNE (LA)	016	13S	23E	INDUSTRIAL	793 99	12X8	733-793	0953	ED Q W
051	- 46	JF DRAINAGE DIS	300223 901444	GRAMERCY AQUIFER A & M DRLG	037	12S	09E	DOMESTIC	250 --	2 METAL		1953	Q
051	- 47	S PACIFIC RR	295458 901104	SHALLOW AQUIFERS OF NEW ORLEANS AREA STAMM-SCHEELE	001	13S	23E	INDUSTRIAL	148 99	8		0855	DMQ PW
051	- 48	PUBLICKER CHEM 3	295509 900340	GONZALES-NEW ORLEANS AQUIFER SUMMERS, D. K.	007	13S	24E	INDUSTRIAL	780 99	16X10	10 MULTIPLE	0955	D Q W
051	- 49	S SHELLFISH CO	295417 900459	GRAMERCY AQUIFER LAYNE (LA)	001	13S	24E	INDUSTRIAL	270 99	12 STEEL	6 205-270	1257	D Q PW

5/18/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 4

WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO
051	- 50	JF DRAINAGE DIS	300154 / 901307	GONZALES-NEW ORLEANS AQUIFER / UNKNOWN	042	12S	10E	DEWATERING	700 / -A	8X4			E W
051	- 51	JF DRAINAGE DIS	300152 / 901303	NORCO AQUIFER / A & M DRLG	042	12S	10E	DEWATERING	350 / -A	2		1953	Q
051	- 52	JF DRAINAGE DIS	300113 / 901047	GRAMERCY AQUIFER / A & M DRLG	044	12S	10E	OTHER	260 / -U	2 / METAL		1953	Q
051	- 53	FOLSE, E J	295313 / 900559	NORCO AQUIFER / ROUSSEL D	004	14S	23E	DOMESTIC	585 / -A	2		1927	Q W
051	- 54	AMER CREOSOTE	295729 / 900819	GONZALES-NEW ORLEANS AQUIFER / SUMMERS, D. K.	038	12S	11E	INDUSTRIAL	772 / -D	6X4	4 / 691-772	1054	Q W
051	- 55	V P LAMBERT CO	295600 / 901404	GRAMERCY AQUIFER / ROUSSEL D	008	13S	22E	DOMESTIC	200 / -A	2.50		1945	W
051	- 56	ISREAL, CHARLES	295409 / 900229	GRAMERCY AQUIFER / A & M DRLG	015	13S	24E	IRRIGATION	221 / -S	3		1951	Q
051	- 57	WWL TV STATION	295436 / 900221	NORCO AQUIFER / UNKNOWN	015	13S	24E	PUBLIC SUPPLY	368 / -A			0957	Q
051	- 58	DARCANTEL, LEON	295533 / 901314	NORCO AQUIFER / A & M DRLG	011	13S	22E	DOMESTIC	382 / -A	3X2.50	2.50 / 362-382	1945	E W
051	- 59	DARCANTEL, LEON	295533 / 901314	SHALLOW AQUIFERS OF NEW ORLEANS AREA / UNKNOWN	011	13S	22E	DOMESTIC	17 / -A	48 / CONCRET			W
051	- 60	SCHROEDER, E L	295726 / 901419	NORCO AQUIFER / BURLEIGH C C	006	13S	22E	DOMESTIC	384 / -A	3		1950	E Q W
051	- 61	TIMBERLANE CC / 1	295237 / 900222	NORCO AQUIFER / MENGE	065	14S	24E	IRRIGATION	422 / --	6X4	4 / 382-422	0560	E MQ W
051	- 62	WIEGAND, ROBERT	295654 / 900917	SHALLOW AQUIFERS OF NEW ORLEANS AREA / HESSE	003	13S	23E	OTHER	160 / -A	4 / METAL	4 / 120-160	0831	Q W
051	- 63	RANSOM LUMBER	295633 / 901055	GONZALES-NEW ORLEANS AQUIFER / BLAKEMORE A	042	13S	10E	INDUSTRIAL	800 / 99	4 / METAL		1947	Q
051	- 64	UNIVERSAL MATCH	295831 / 901646	GONZALES-NEW ORLEANS AQUIFER / MENGE	038	12S	09E	INDUSTRIAL	719 / 99	10X6X6 / METAL	6 / MULTIPLE	0756	ED Q W
051	- 65	NO AVIATION BD / 2	295906 / 901527	GONZALES-NEW ORLEANS AQUIFER / MENGE	037	12S	09E	INDUSTRIAL	698 / 99	10X8 / STEEL	8 / 638-699	1158	D Q PW
051	- 66	NO AVIATION BD / 1	295907 / 901529	GONZALES-NEW ORLEANS AQUIFER / MENGE	037	12S	09E	INDUSTRIAL	697 / 99	10X8X8 / STEEL	8 / 637-697	1258	D Q PW

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

5/18/95 LOUISIANA DOTD - WATER WELL REGISTRATION SYSTEM PAGE 5

WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO
051	- 67	C DENNERY INC	295742 / 901046	GONZALES-NEW ORLEANS AQUIFER / LAYNE (LA)	044	12S	10E	INDUSTRIAL	788 / 99	10X5X5 / METAL	5 / MULTIPLE	0256	D Q W
051	- 68	DELTA PETROLEUM	295826 / 900915	GONZALES-NEW ORLEANS AQUIFER / MENGE	046	12S	10E	INDUSTRIAL	717 / 99	6X4X4 / METAL	4 / MULTIPLE	1054	D
051	- 69	NATIONAL GYPSUM 1	295501 / 900836	GONZALES-NEW ORLEANS AQUIFER / MENGE	008	13S	23E	INDUSTRIAL	761 / 99	6X4 / STEEL	4 / MULTIPLE	1055	D Q W
051	- 70	NATIONAL GYPSUM 2	295504 / 900835	GONZALES-NEW ORLEANS AQUIFER / MENGE	008	13S	23E	INDUSTRIAL	768 / PA	6X4	4 / 727-768	1155	D Q W
051	- 71	GR ND EXPWY COM	300109 / 900910	GONZALES-NEW ORLEANS AQUIFER / MENGE	046	12S	10E	DOMESTIC	566 / PA	4X4 / STEEL	551-566	0556	D Q W
051	- 72	CLANCY, FRANK 3	300128 / 901450	GONZALES-NEW ORLEANS AQUIFER / A & M DRLG	037	12S	09E	IRRIGATION	220 / -S	2		1953	Q W
051	- 73	CLANCY, FRANK 4	300128 / 901519	GRAMERCY AQUIFER / A & M DRLG	037	12S	09E	IRRIGATION	220 / -S	2		1953	Q W
051	- 74	CLANCY, FRANK	300155 / 901450	GRAMERCY AQUIFER / A & M DRLG	037	12S	09E	DOMESTIC	220 / -A	24		1953	Q W
051	- 75	U S GEOL SURVEY	295739 / 901552	SHALLOW AQUIFERS OF NEW ORLEANS AREA / U.S.G.S.	003	13S	22E	TEST HOLE	96 / -A	1.25 / METAL	1.25 / 80-96	0760	DMQ W
051	- 76	U S GEOL SURVEY USCE PB-59	295704 / 901547	NO WELL MADE, LOG DEPTH SHOWN / U.S.G.S.	003	13S	22E	TEST HOLE	82 / PA			0760	D
051	- 77	CYTEC INDUSTRIE SHALLOW	295749 / 901537	SHALLOW AQUIFERS OF NEW ORLEANS AREA / UNKNOWN	003	13S	22E	OTHER	39 / -D	2			W
051	- 78	CYTEC INDUSTRIE DAIRY WELL	295742 / 901555	NORCO AQUIFER / UNKNOWN	003	13S	22E	OTHER	400 / -A	2		1948	Q
051	- 79	JOHNSON, E H	295650 / 901356	NORCO AQUIFER / A & M DRLG	006	13S	22E	DOMESTIC	400 / -A	2 / METAL		1950	W
051	- 80	JOHNSON, E H	295650 / 901356	SHALLOW AQUIFERS OF NEW ORLEANS AREA / A & M DRLG	006	13S	22E	DOMESTIC	50 / -A	2		1950	W
051	- 81	JOHNSON, E H	295651 / 901356	SHALLOW AQUIFERS OF NEW ORLEANS AREA / UNKNOWN	006	13S	22E	DOMESTIC	6 / -A	42 / WOOD		1860	W
051	- 82	PAILET IND	295833 / 900909	NORCO AQUIFER / BROWN, H.	046	12S	10E	INDUSTRIAL	460 / -A	10 / METAL		0133	Q W
051	- 83	AVONDALE SHIPYD	295523 / 901130	GONZALES-NEW ORLEANS AQUIFER / UNKNOWN	026	13S	22E	INDUSTRIAL	890 / -A	8		1042	E Q W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	- 84	WESTSIDE CREAMY	295506	SHALLOW AQUIFERS OF NEW ORLEANS AREA					12	36		1943	Q
		901252	UNKNOWN	O15	13S	22E	PUBLIC SUPPLY	-A	BRICK			
051	- 85	WESTSIDE CREAMY	295506	GRAMERCY AQUIFER					225	2		1947	Q
		901252	A & M DRLG	O15	13S	22E	PUBLIC SUPPLY	-A				
051	- 86	GAMBINO, FRANK	295506	GRAMERCY AQUIFER					210	2		1948	Q W
		901245	A & M DRLG	O16	13S	22E	DOMESTIC	-D				
051	- 87	HUNT SHIPYARD	295057	NORCO AQUIFER					480	4		1957 E	Q W
		1	900330	JOBIE DRILL	O56	14S	24E	INDUSTRIAL	-A				
051	- 88	CHURCHILL FARMS	295348	NORCO AQUIFER					400	2		0927	MQ
		901038	ROUSSEL D	O20	14S	23E	DOMESTIC	-A	METAL				
051	- 89	CAPDEBOSCQ, J	295052	NORCO AQUIFER					426	2		1928	W
		900656	ROUSSEL D	O07	14S	23E	DOMESTIC	-A					
051	- 90	CAPDEBOSCQ, J	295052	NORCO AQUIFER					440	2		1249	Q
		900656	A & M DRLG	O07	14S	23E	IRRIGATION	-S			410-430		
051	- 91	ARNONDIN,WALTON	295548	GRAMERCY AQUIFER					186	2		1950	Q W
		901018	UNKNOWN	O01	13S	23E	DOMESTIC	-A	METAL				
051	- 92	DEWEESE, H G	295523	NORCO AQUIFER					450	2		1947	W
		901303	UNKNOWN	O12	13S	22E	DOMESTIC	-A					
051	- 93	PUNCH, ODELIE	295104	NORCO AQUIFER					474	2		1955	Q
		900334	ANTHON, J	O56	14S	24E	DOMESTIC	--			462-474		
051	- 94	PARADELAS, J	295337	GRAMERCY AQUIFER					262	2		1951	Q W
		900212	A & M DRLG	O32	14S	24E	DOMESTIC	--			256-262		
051	- 95	FORTADO, AUGUST	295323	GRAMERCY AQUIFER					262	2		1952	Q W
		900202	A & M DRLG	O32	14S	24E	DOMESTIC	--					
051	- 96	REPAK, JOHN	295333	GRAMERCY AQUIFER					260	2		1952	Q
		900216	A & M DRLG	O32	14S	24E	DOMESTIC	-A					
051	- 97	HOURCADE, JOE	295235	NORCO AQUIFER					503	2		1939	Q
		900557	SELLERS	O34	14S	23E	DOMESTIC	-A					
051	- 98	BENINATE, V	295312	GRAMERCY AQUIFER					259	4		1257	Q W
		900107	HEBERT A J	O30	14S	24E	DOMESTIC	--			239-259		
051	- 99	BENINATE, V	295312	GRAMERCY AQUIFER					260	2		1928	Q
		900107	UNKNOWN	O30	14S	24E	DOMESTIC	-A					
051	- 100	GAMBINO,MICHAEL	295228	GONZALES-NEW ORLEANS AQUIFER					709	2		1939 E	Q W
		900556	DELAUNE H	O34	14S	23E	DOMESTIC	-D	METAL				

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	- 101	GAMBINO,MICHAEL	295227 / 900956	NORCO AQUIFER / DELAUNE H	034	14S	23E	DOMESTIC	550 -A	2		0931	Q
051	- 102	SIEVERS, J F	295125 / 900637	NORCO AQUIFER / UNKNOWN	007	14S	23E	DOMESTIC	560 -A	2		1928	Q W
051	- 103	CHRISTIANA BROS	295358 / 900235	GRAMERCY AQUIFER / SUMMERS, D. K.	032	14S	24E	IRRIGATION	289 -A	3		0958	Q
051	- 104	KOGOS, PETER	294553 / 900503	GRAMERCY AQUIFER / HACH G	037	15S	24E	INDUSTRIAL	355 -A	4	315-355	1945 E	Q W
051	- 105	DELGRANDILE, W	294155 / 900597	GRAMERCY AQUIFER / DELAUNE H	001	16S	23E	DOMESTIC	322 -A	2	282-322	1944	Q
051	- 106	OTERO, EDDIE	294036 / 900623	NORCO AQUIFER / UNKNOWN	005	16S	23E	INDUSTRIAL	485 -D	6 STEEL		1934	Q
051	- 107	OTERO, EDDIE	294039 / 900620	GRAMERCY AQUIFER / DUQUESNE	005	16S	23E	INDUSTRIAL	374 -A	6		1928 E	Q W
051	- 108	PERRIN, CLEM	294122 / 900551	GRAMERCY AQUIFER / UNKNOWN	003	16S	23E	DOMESTIC	360 -A			1944	Q
051	- 109	GEORGUSIS, H 2	294112 / 900553	GRAMERCY AQUIFER / MENGE	003	16S	23E	INDUSTRIAL	371 99	6	4 MULTIPLE	0660 D	Q
051	- 110	GEORGUSIS, H 1	294112 / 900553	GRAMERCY AQUIFER / UNKNOWN	003	16S	23E	INDUSTRIAL	320 99	4		0644	Q
051	- 111	CAPT ED BISSO	295752 / 901504	GRAMERCY AQUIFER / DELAUNE H	004	13S	22E	DOMESTIC	272 -A	2 METAL		1935	Q W
051	- 112	RASSELLS CARPET	295825 / 900952	GONZALES-NEW ORLEANS AQUIFER / RILEY DRLG	045	12S	10E	INDUSTRIAL	790 99	6X3	3 750-790	0456 D	Q W
051	- 113	SALZER, A J	295915 / 900812	SHALLOW AQUIFERS OF NEW ORLEANS AREA / CHARBONNET	125	12S	11E	DOMESTIC	70 -A	1.50		0552	Q
051	- 114	FAVROT, UNCAS B	295853 / 900834	SHALLOW AQUIFERS OF NEW ORLEANS AREA / FAVRET, UNCAS	050	12S	10E	OTHER	136 -U	1.50			Q
051	- 115	EBLE, FRANK J	295903 / 900815	NORCO AQUIFER / CHARBONNET	125	12S	11E	DOMESTIC	490 -D	2		0852	Q W
051	- 116	EARNEST CONST	295205 / 900555	NORCO AQUIFER / DELAUNE H	034	14S	23E	DOMESTIC	463 -A	2.50		0841	Q W
051	- 117	FABACHER, H A	295750 / 901237	GRAMERCY AQUIFER / BANKSTON	039	12S	10E	TEST HOLE	153 -A	4		0554	Q

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER
REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	- 118	FABACHER, H A	295750 901237	GONZALES-NEW ORLEANS AQUIFER BANKSTON	039	12S	10E	DOMESTIC	785 --	4	4 765-785	0254	Q
051	- 119	CARTER, A C	295936 901054	SHALLOW AQUIFERS OF NEW ORLEANS AREA GONDOLFO	044	12S	10E	DOMESTIC	58 -A	2	2 55-58	1950	Q W
051	- 120	GULF ATL WREHSE	295812 900548	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	047	12S	10E	OTHER	780 -A	8	8 705-780	1920	E W
051	- 121	FOURROUX, W J	300148 901410	GRAMERCY AQUIFER A & M DRLG	038	12S	10E	IRRIGATION	263 -S	2	2 253-263	1953	Q W
051	- 122	WWL RADIO-LOY U	300222 901423	NORCO AQUIFER UNKNOWN	038	12S	10E	PUBLIC SUPPLY	350 -D	METAL	340-350	0239	Q
051	- 123	WWL RADIO-LOY U	300222 901423	NORCO AQUIFER UNKNOWN	038	12S	10E	PUBLIC SUPPLY	350 -C	METAL	335-350	1948	Q
051	- 124	LIVEOAK MNR SUB	295716 901414	NORCO AQUIFER BURLEIGH C C	006	13S	22E	INDUSTRIAL	400 99	2		1950	Q
051	- 125	J J RELLE,INC	295043 900625	SHALLOW AQUIFERS OF NEW ORLEANS AREA UNKNOWN	007	14S	23E	IRRIGATION	60 -S	2	2 59-60	0650	Q W
051	- 126	HECKER, FAITH G	295048 900644	NORCO AQUIFER UNKNOWN	007	14S	23E	DOMESTIC	440 -A	4	4 403-440	1925	E Q W
051	- 127	COMISKEY, M C	295612 901338	GRAMERCY AQUIFER DELAUNE H	008	13S	22E	DOMESTIC	184 -A	2 METAL		1938	Q W
051	- 128	GAUDET, L ET AL	295741 901627	NORCO AQUIFER UNKNOWN	004	13S	22E	OTHER	356 -A	2X3 METAL	3 341-356		E W
051	- 129	CRISTINA ICE SR	295835 901437	GONZALES-NEW ORLEANS AQUIFER ARTESIAN WEL	042	12S	09E	INDUSTRIAL	709 -A	8		0923	D
051	- 130	US IND CHEMICAL	295438 900822	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	041	13S	23E	INDUSTRIAL	750 -A	12		1925	E
051	- 131	US IND CHEMICAL	295432 900824	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	041	13S	23E	INDUSTRIAL	750 -A	12		1925	W
051	- 132	ROBINSON CAN CO	295357 900914	GONZALES-NEW ORLEANS AQUIFER CARLOSS	008	13S	23E	INDUSTRIAL	785 99	10 METAL	8 730-785	1953	D Q W
051	- 133	GAMBINO, CALVIN	295304 900648	NORCO AQUIFER HEBERT A J	007	14S	23E	IRRIGATION	377 -S	2	2 357-377	1955	Q W
051	- 134	GAMBINO, CALVIN	295304 900648	NORCO AQUIFER SELLERS	007	14S	23E	DOMESTIC	355 -A	2		1940	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	- 135	GAMBINO, CALVIN	295304 900648	SHALLOW AQUIFERS OF NEW ORLEANS AREA TAYLOR	007 14S 23E	DOMESTIC	151 -A	2		1940	W
051	- 136	PUB BELT RR COM	295652 901023	NO WELL MADE, LOG DEPTH SHOWN UNKNOWN	044 13S 10E	TEST HOLE	600 PA			1926	D
051	- 137	PUB BELT RR COM	295627 900954	NO WELL MADE, LOG DEPTH SHOWN UNKNOWN	001 13S 23E	TEST HOLE	600 PA			1926	D
051	- 138	U S CORPS ENGRS B-112	295541 900326	NO WELL MADE, LOG DEPTH SHOWN U.S. ARMY (NOD)	011 13S 24E	TEST HOLE	300 PA				
051	- 139	I C RR	295816 901210	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	041 12S 10E	OTHER	774 -A	4X2	2 758-774	0549	D Q W
051	- 140	PENDLETON TERM	295453 900827	GRAMERCY AQUIFER UNKNOWN	039 13S 23E	OBSERVATION	240 -A	10			E
051	- 141	AVONDALE SHIPYD 1	295525 901117	GONZALES-NEW ORLEANS AQUIFER MENGE	026 13S 22E	INDUSTRIAL	740 PA	8X6X6	6 MULTIPLE	0262	D Q W
051	- 142	WALKER-ROEMER 1	295957 901031	GONZALES-NEW ORLEANS AQUIFER MENGE	044 12S 10E	INDUSTRIAL	732 PA	8X6 METAL	6 MULTIPLE	0362	D Q W
051	- 143	1ST NAT BANK	295655 901102	GONZALES-NEW ORLEANS AQUIFER BRADEN PUMP	042 13S 10E	INDUSTRIAL	760 99	6X4 STEEL	4 740-760	1286	ED W
051	- 144	BORDENS FOOD CO	295501 900834	GONZALES-NEW ORLEANS AQUIFER UNKNOWN	008 13S 23E	INDUSTRIAL	780 PA	10X6 STEEL			
051	- 145	AV PROGRAM MANA 1	295907 901539	GONZALES-NEW ORLEANS AQUIFER STAMM-SCHEELE	038 12S 09E	OTHER	722 -F	18X10 STEEL	10 640-722	0285	EDMQ PW
051	- 146	U S CORPS ENGRS	295444 900817	NO WELL MADE, LOG DEPTH SHOWN U.S. ARMY (NOD)	041 13S 23E	TEST HOLE	189 PA			1161	D
051	- 147	CYTEC INDUSTRIE 1	295731 901605	NORCO AQUIFER MENGE	003 13S 22E	INDUSTRIAL	473 PA	18X10	10 MULTIPLE	0763	D W
051	- 148	U S STEEL CORP	295625 901118	GONZALES-NEW ORLEANS AQUIFER MENGE	041 13S 10E	INDUSTRIAL	730 99	6X4 METAL	4 MULTIPLE	1164	Q
051	- 149	METAIRIE C CLUB	295832 900803	GONZALES-NEW ORLEANS AQUIFER MENGE	030 12S 11E	IRRIGATION	749 --	10X6 STEEL	6 MULTIPLE	1165	D Q W
051	- 150	CYTEC INDUSTRIE 2	295739 901606	NORCO AQUIFER MENGE	003 13S 22E	INDUSTRIAL	471 PA	20X12 STEEL	12 MULTIPLE	0764	D W
051	- 151	BOLLINGER O R	295401 900456	GRAMERCY AQUIFER MENGE	044 14S 24E	INDUSTRIAL	242 99	6X4 STEEL	4 214-242	0367	D

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	- 152	NATIONAL GYPSUM	295504 900936	GONZALES-NEW ORLEANS AQUIFER MENGE	008 13S 23E	INDUSTRIAL	771 PA	8X6 STEEL	6 MULTIPLE	1068	D Q
051	- 153	W & H WAREHOUSE	295858 901541	GONZALES-NEW ORLEANS AQUIFER LAMBERT'S	037 12S 09E	OBSERVATION	670 -A	8X6 STEEL	6 630-670	1168	E W
051	- 154	E JEFFERSON W W	295741 900946	NO WELL MADE, LOG DEPTH SHOWN MENGE	046 12S 10E	TEST HOLE	518 PA			0773	E
051	- 155	JF CON WTR DIST SOUTH	295730 900945	GONZALES-NEW ORLEANS AQUIFER MENGE	046 12S 10E	PUBLIC SUPPLY	670 -A	5X3 STEEL	5 665-670	1973	ED
051	- 156	JF CON WTR DIST NORTH	295739 900946	GONZALES-NEW ORLEANS AQUIFER MENGE	046 12S 10E	OBSERVATION	780 -A	4 PLASTIC	4 MULTIPLE	1073	D W
051	- 157	EXXON CO USA	291520 895750	DELTAIC DEPOSITS, YOUNGER MCDERMOTT F	21S 25E	INDUSTRIAL	290 -A			1947	ED Q
051	- 158	AVONDALE SHIPYD 1	295527 900839	GONZALES-NEW ORLEANS AQUIFER MENGE	007 13S 23E	INDUSTRIAL	798 99	10X7	7 MULTIPLE	0171	D Q W
051	- 159	AVONDALE SHIPYD 2	295536 901049	GONZALES-NEW ORLEANS AQUIFER MENGE	001 13S 23E	INDUSTRIAL	798 99	10X6	6 MULTIPLE	0667	D Q W
051	- 160	AVONDALE SHIPYD 3	295518 901123	GONZALES-NEW ORLEANS AQUIFER MENGE	026 13S 22E	INDUSTRIAL	836 99	12X9	10 MULTIPLE	1268	D Q W
051	- 161	AVONDALE SHIPYD 4	295549 901041	GONZALES-NEW ORLEANS AQUIFER MENGE	001 13S 23E	INDUSTRIAL	772 99	12X9	10 MULTIPLE	0271	D Q W
051	- 162	CHATEAU ESTATES	300135 901514	GONZALES-NEW ORLEANS AQUIFER MENGE	037 12S 09E	IRRIGATION	628 --	8X6	6 MULTIPLE	0873	D Q W
051	- 163	COLONIAL CLUB	295545 901230	GONZALES-NEW ORLEANS AQUIFER MENGE	039 13S 10E	IRRIGATION	768 --	10X6	MULTIPLE	0366	D Q W
051	- 164	TIMBERLANE CC	295238 900226	NORCO AQUIFER MENGE	065 14S 24E	IRRIGATION	420 --	10X6	6 395-420	0474	D
051	- 165	KERNER FROZEN F 1	294357 900736	NORCO AQUIFER MENGE	015 15S 23E	INDUSTRIAL	401 20	8X6 STEEL	6 348-401	0679	DM W
051	- 166	U S GEOL SURVEY	295355 900442	"1200-FOOT" SAND OF NEW ORLEANS AREA ANTHON, M. C.	044 14S 24E	OBSERVATION	1302 -O	2 METAL	2 1290-1300	1281	EDMQ W
051	- 167	U S GEOL SURVEY	295355 900442	GONZALES-NEW ORLEANS AQUIFER ANTHON	044 14S 24E	OBSERVATION	725 -O	2 METAL	2 715-725	1281	DMQ W
051	- 168	JEFFERSON PAR	295940 901108	GONZALES-NEW ORLEANS AQUIFER MENGE	044 12S 10E	INDUSTRIAL	744 PA	10X8 STEEL	8 693-744	0672	D Q W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	TOWN SHIP	TOWN RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	- 169	WALKER-ROEMER 2	300000 / 901035	GONZALES-NEW ORLEANS AQUIFER / MENGE	044	12S	10E	INDUSTRIAL	740 / 20	8X6	6 / 701-740	0583	DMQ W
051	- 170	JEFFERSON PAR	300011 / 901238	GONZALES-NEW ORLEANS AQUIFER / MENGE	041	12S	10E	IRRIGATION	737 / --	6X4	4 / 702-737	0281	DMQ W
051	- 171	LAKE DEV CO	300210 / 901415	GONZALES-NEW ORLEANS AQUIFER / MENGE	038	12S	10E	IRRIGATION	557 / --	4X2 STEEL	2 / 526-557	0779	DMQ W
051	- 172	E JEFF HOSPITAL 1	300040 / 901045	GONZALES-NEW ORLEANS AQUIFER / MENGE	044	12S	10E	PUBLIC SUPPLY	628 / -T	8X6	6 / 598-628	1080	D Q W
051	- 173	GOLD BOND BLDG 4	295505 / 900830	GONZALES-NEW ORLEANS AQUIFER / MENGE	008	13S	23E	INDUSTRIAL	783 / 99	8X6	6 / 732-783	1180	D W
051	- 174	CUTCHER CAN CO 3	295500 / 900825	GONZALES-NEW ORLEANS AQUIFER / MENGE	039	13S	23E	INDUSTRIAL	804 / 20	10X8 STEEL	8 / 743-804	0578	DM W
051	- 175	JF DRAINAGE DIS 1	300110 / 900840	GONZALES-NEW ORLEANS AQUIFER / BRADEN PUMP	050	12S	10E	INDUSTRIAL	640 / -I	6X4 STEEL	4 / 600-640	0884	ED Q W
051	- 176	JF DRAINAGE DIS 2	300111 / 901047	GONZALES-NEW ORLEANS AQUIFER / BRADEN PUMP	044	12S	10E	INDUSTRIAL	610 / -I	6X4 STEEL	MULTIPLE	0884	ED Q W
051	- 177	JF DRAINAGE DIS 3	300154 / 901300	GONZALES-NEW ORLEANS AQUIFER / BRADEN PUMP	042	12S	10E	INDUSTRIAL	650 / -I	6X4 STEEL	4 / 610-650	0884	D Q W
051	- 178	JF DRAINAGE DIS 4	300222 / 901446	GONZALES-NEW ORLEANS AQUIFER / BRADEN PUMP	037	12S	09E	INDUSTRIAL	700 / -I	6X4 STEEL	4 / 660-700	0884	D Q W
051	- 179	LINCOLN PROP IN	300127 / 901626	GONZALES-NEW ORLEANS AQUIFER / ANTHON, M. C.	037	12S	09E	IRRIGATION	325 / --	4X4 PLASTIC	4 / 285-315	0884	D W
051	- 180	OCHSNER CLINIC 1	295738 / 900847	GONZALES-NEW ORLEANS AQUIFER / STAMM-SCHEELE	047	13S	10E	INDUSTRIAL	730 / 99	10X8 STEEL	8 / 649-730	1184	DMQ W
051	- 181	MID SOUTH UTIL	295434 / 900315	GONZALES-NEW ORLEANS AQUIFER / ANTHON	006	13S	24E	POWER GENERAT.	740 / --	6X4X4 METAL	4 / 680-740	0685	ED W
051	- 182	U S GEOL SURVEY	300025 / 901439	GONZALES-NEW ORLEANS AQUIFER / U.S.G.S.	042	12S	09E	OBSERVATION	605 / -O	4X2 STEEL	2 / 595-605	0886	EDMQ W
051	- 183	U S GEOL SURVEY	300206 / 901631	GONZALES-NEW ORLEANS AQUIFER / U.S.G.S.	002	12S	09E	OBSERVATION	612 / -O	4X2	2 / 602-612	0886	ED Q W
051	- 184	U S GEOL SURVEY	295926 / 901432	GONZALES-NEW ORLEANS AQUIFER / U.S.G.S.	038	12S	10E	OBSERVATION	704 / -O	4X2	2 / 694-704	0886	EDMQ W
051	- 185	U S GEOL SURVEY	295823 / 901236	GONZALES-NEW ORLEANS AQUIFER / U.S.G.S.	041	12S	10E	OBSERVATION	766 / -O	4X2 STEEL	2 / 756-766	0986	EDMQ W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	- 186	U S GEOL SURVEY	300223 901446	NORCO AQUIFER U.S.G.S.	037	12S	09E	OBSERVATION	325 -O	4X2 STEEL	2 315-325	0988	EDMQ	W
051	- 187	JF DRAINAGE DIS	300041 901642	GONZALES-NEW ORLEANS AQUIFER BRADEN PUMP	015	12S	09E	INDUSTRIAL	585 -I	6X4 STEEL	4 MULTIPLE	0687	EDM	W
051	- 188	JF DRAINAGE DIS	295352 900928	NORCO AQUIFER BRADEN PUMP	016	14S	23E	INDUSTRIAL	440 -I	6X4	4 415-440	0686	EDM	W
051	- 189	CHALSTROM, H DR	295816 901406	GONZALES-NEW ORLEANS AQUIFER ANTHON	038	12S	10E	IRRIGATION	750 --	6X3 METAL	3 720-750	0287	D	W
051	- 190	JF DRAINAGE DIS	295300 900435	GONZALES-NEW ORLEANS AQUIFER BRADEN PUMP	044	14S	24E	INDUSTRIAL	440 -I	6X4 STEEL	4 395-440	1186	D	W
051	- 191	CELOTEX CORP 1	295418 900741	GONZALES-NEW ORLEANS AQUIFER ANTHON, M. C.	012	13S	23E	INDUSTRIAL	815 26	8 METAL	6 735-815	0988	D	W
051	- 192	PERINO SEAFOOD	295346 900822	GRAMERCY AQUIFER ANTHON	001	14S	23E	IRRIGATION	290 -O	4X2X2 PLASTIC	2 260-290	1090	D	W
051	- 193	LA PACKING 2	295356 900915	NORCO AQUIFER LAYNE (LA)	008	13S	23E	INDUSTRIAL	450 20	8 STEEL	4 400-450	0588	ED	PW
051	- 194	LAFITTE FR FOOD 1	294038 900821	GRAMERCY AQUIFER LAYNE (BR)	004	16S	23E	PUBLIC SUPPLY	420 -C	10X6 STEEL	6 360-420	0990	EDMQ	PW
051	-5001Z	EXXON CO USA MW-4	295413 900407	AQUIFER UNKNOWN UNKNOWN	002	13S	24E	MONITOR	EX	4				
051	-5002Z	FORMAN EXPLORA WILLSWOOD1	295503 901346	NORCO AQUIFER RIG WATER	011	13S	22E	RIG SUPPLY	420 PA			1180		
051	-5003Z	WESTLAND OIL RATHBORN 5	294332 900751	NORCO AQUIFER RIG WATER	002	16S	23E	RIG SUPPLY	210 PA	4 STEEL	4 190-210	0982	D	
051	-5004Z	LGS EXPLORATION RIVERBEN 1	295459 901006	GRAMERCY AQUIFER GUICHARD	003	13S	23E	RIG SUPPLY	285 PA			1182		
051	-5005Z	UNION TEXAS PET IMC REAL 1	294902 900455	GRAMERCY AQUIFER BROWN, H.	055	14S	24E	RIG SUPPLY	305 PA	4 STEEL	4 285-305	1082	D	W
051	-5006Z	GRAHAM OIL & GA MISSOURI 1	295434 900907	NORCO AQUIFER RIG WATER	008	13S	23E	RIG SUPPLY	440 PA	4 STEEL	4 420-440	0283	D	
051	-5007Z	CHEVRON FLEMING 40	294319 900658	NORCO AQUIFER BROWN, H.	001	16S	23E	RIG SUPPLY	365 PA	4 STEEL	4 345-365	0284	D	W
051	-5008Z	EXXON CO USA EXXON 13	295434 901210	NORCO AQUIFER BROWN, H.	024	13S	22E	RIG SUPPLY	485 PA	4 STEEL	4 465-485	0884	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5009Z	CANLAN OIL RIVERBEN 1	295450 901009	GRAMERCY AQUIFER RIG WATER	003	13S	23E	RIG SUPPLY	280 PA	4 STEEL	4 260-280	0185	D	
051	-5010Z	ROSEWOOD RES MOLOISON 1	295427 901301	NORCO AQUIFER GUICHARD	016	13S	22E	RIG SUPPLY	422 PA	4 STEEL	4 402-422	0485	D	W
051	-5011Z	EQUITABLE PETRO CHURCHIL 1	295246 901049	NORCO AQUIFER BROWN, H.	021	14S	23E	RIG SUPPLY	465 PA			0285		
051	-5012Z	SHELL OIL 1	295810 900752	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	038	12S	11E	MONITOR	12 PA	4 PLASTIC	4 7-12	1285	D	
051	-5013Z	SHELL OIL 2	295811 900752	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	038	12S	11E	MONITOR	12 PA	4 PLASTIC	4 7-12	1285	D	
051	-5014Z	SHELL OIL 3	295812 900751	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	038	12S	11E	MONITOR	12 PA	4 PLASTIC	4 7-12	1285	D	
051	-5015Z	SHELL OIL 4	295813 900750	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	038	12S	11E	MONITOR	12 PA	4 PLASTIC	4 7-12	1285	D	
051	-5016Z	SHELL OIL 5	295812 900755	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	038	12S	11E	MONITOR	12 PA	4 PLASTIC	4 7-12	1285	D	
051	-5017Z	CANLAN OIL CRUTCHER 1	295453 901012	GRAMERCY AQUIFER RIG WATER	003	13S	23E	RIG SUPPLY	270 --	4 STEEL	4 210-270	1085	D	
051	-5018Z	BERNARD, ERNEST	295458 901130	DELTAIC DEPOSITS, YOUNGER LAMBERT'S	067	14S	22E	DOMESTIC	105 --	2 PLASTIC	2 95-105	0685	D	
051	-5019Z	PACE INDUSTRIES MW-1	295529 901103	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BURMAH	044	12S	10E	MONITOR	36 --	4 PLASTIC	4 26-36	0386	D	W
051	-5020Z	PACE INDUSTRIES MW-2	295529 901103	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BURMAH	044	12S	10E	MONITOR	36 --	2 PLASTIC	2 26-36	0386	D	W
051	-5021Z	PACE INDUSTRIES MW-3	295529 901103	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BURMAH	044	12S	10E	MONITOR	36 --	2 PLASTIC	2 26-36	0386	D	W
051	-5022Z	PACE INDUSTRIES MW-4	295529 901103	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BURMAH	044	12S	10E	MONITOR	36 --	2 PLASTIC	2 26-36	0386	D	W
051	-5023Z	TENNECO 1	295716 900940	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT HUGHES, INC.	045	12S	10E	MONITOR	10 --	4 PLASTIC	4 2-10	0486	D	W
051	-5024Z	TENNECO 2	295716 900940	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT HUGHES, INC.	045	12S	10E	MONITOR	10 --	4 PLASTIC	4 2-10	0486	D	W
051	-5025Z	TENNECO 3	295716 900940	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT HUGHES, INC.	045	12S	10E	MONITOR	10 --	4 PLASTIC	4 2-10	0486	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5026Z	TENNECO 4	295716 / 900940	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / HUGHES, INC.	045	12S	10E	MONITOR	10 --	4 PLASTIC	4 2-10	0486	D	W
051	-5027Z	HCI MEDICAL B-18	295744 / 901145	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / POPE		12S	10E	PIEZOMETER	78 --	3 PLASTIC	3 73-78	0386	D	
051	-5028Z	HCI MEDICAL N-P1	295744 / 901145	DELTAIC DEPOSITS, YOUNGER / POPE		12S	10E	PIEZOMETER	110 --	3 PLASTIC	3 105-110	0386	D	
051	-5029Z	AMOCO OIL 1	300018 / 901305	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	041	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	W
051	-5030Z	AMOCO OIL 2	300018 / 901305	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	041	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	W
051	-5031Z	AMOCO OIL 3	300018 / 901305	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	041	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	W
051	-5032Z	AMOCO OIL 1	295707 / 901015	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	044	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	W
051	-5033Z	AMOCO OIL 2	295707 / 901015	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	044	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	W
051	-5034Z	AMOCO OIL 3	295707 / 901015	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	044	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	W
051	-5035Z	AMOCO OIL 1	300018 / 901427	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	038	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	W
051	-5036Z	AMOCO OIL 2	300018 / 901427	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	038	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	W
051	-5037Z	AMOCO OIL 1	300002 / 900820	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	050	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	
051	-5038Z	AMOCO OIL 2	300002 / 900820	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	050	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D	
051	-5039Z	BFI W-1	295446 / 901531	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	039	13S	22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0887		W
051	-5040Z	BFI W-2	295446 / 901526	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	039	13S	22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0887	D	W
051	-5041Z	BFI W-3	295440 / 901527	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	039	13S	22E	MONITOR	46 PA	2 PLASTIC	2 41-46	0887	D	W
051	-5042Z	AMOCO OIL DW-1	295623 / 901142	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	040	13S	10E	MONITOR	13 PA	2 PLASTIC	2 3-13	0686	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	-5043Z	AMOCO OIL OW-2	295623 / 901142	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	040	13S	10E	MONITOR	13 PA	2 PLASTIC	2 3-13	0686	D W
051	-5044Z	AMOCO OIL OW-3	295623 / 901142	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	040	13S	10E	MONITOR	13 PA	2 PLASTIC	2 3-13	0686	D W
051	-5045Z	BFI W-4	295440 / 901530	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	039	13S	22E	MONITOR	31 PA	2 PLASTIC	2 26-31	0887	D W
051	-5046Z	AMOCO OIL 3	300002 / 900820	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / J & R DRILLING	050	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0686	D
051	-5047Z	TENNECO MW-4	300008 / 900912	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	046	12S	10E	MONITOR	8 --	4 PLASTIC	4 3-8	0786	D W
051	-5048Z	JEFFERSON PAR MW-1	295834 / 901110	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5049Z	JEFFERSON PAR MW-2	295837 / 901110	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5050Z	JEFFERSON PAR MW-3	295837 / 901110	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5051Z	JEFFERSON PAR MW-4	295843 / 901117	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5052Z	JEFFERSON PAR MW-5	295838 / 901108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5053Z	JEFFERSON PAR MW-6	295840 / 901113	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5054Z	JEFFERSON PAR MW-7	295843 / 901114	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5055Z	JEFFERSON PAR MW-8	295846 / 901115	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5056Z	JEFFERSON PAR MW-9	295849 / 901116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5057Z	JEFFERSON PAR MW-10	295849 / 901116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5058Z	JEFFERSON PAR MW-11	295850 / 901115	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D
051	-5059Z	JEFFERSON PAR MW-12	295850 / 901112	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	044	12S	10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5060Z	JEFFERSON PAR MW-13	295852 901117	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D	
051	-5061Z	JEFFERSON PAR MW-15	295857 901119	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D	
051	-5062Z	JEFFERSON PAR MW-16	295859 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D	
051	-5063Z	JEFFERSON PAR MW-17	295858 901119	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D	
051	-5064Z	JEFFERSON PAR MW-18	295859 901119	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D	
051	-5065Z	JEFFERSON PAR MW-14	295855 901117	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	18 PA	1.25 PLASTIC	1.25 13-18	0886	D	
051	-5066Z	SHELL OIL H-1	295901 900745	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 12S 01E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5067Z	SHELL OIL H-2	295901 900745	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 12S 11E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5068Z	SHELL OIL H-3	295901 900745	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 12S 11E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5069Z	SHELL OIL H-4	295901 900745	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 12S 11E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5070Z	SHELL OIL H-5	295901 900745	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 12S 11E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5071Z	SHELL OIL H-6	295901 900745	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 12S 11E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5072Z	SCHWEGMANN MW-10	300011 900953	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	045 12S 10E	MONITOR	10 --	4 PLASTIC	4 2-10	0894	D	W
051	-5073Z	TENNECO H-8	300000 900900	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5074Z	TENNECO H-11	300000 900900	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 11E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5075Z	TENNECO H-18	300000 900900	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BARRINGTON'S	12S 11E	MONITOR	12 --	4 PLASTIC	4 2-12	0786	D	W
051	-5076Z	JEFFERSON PAR E2-1	295827 901335	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039 12S 10E	MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	0985	D	

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH / SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5077Z	JEFFERSON PAR E2-2	295823 901337	S.E. LA. AQ. SYSTEM PSI/PTL	039	12S	10E	SURFICIAL CONFINING UNIT MONITOR	21 PA	1.25 PLASTIC	1.25 15-20	0986	D	
051	-5078Z	JEFFERSON PAR E2-3	295820 901339	S.E. LA. AQ. SYSTEM PSI/PTL	039	12S	10E	SURFICIAL CONFINING UNIT MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	0986	D	
051	-5079Z	JEFFERSON PAR E2-4	295817 901341	S.E. LA. AQ. SYSTEM PSI/PTL	039	12S	10E	SURFICIAL CONFINING UNIT MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	0986	D	
051	-5080Z	JEFFERSON PAR E2-5	295814 901343	S.E. LA. AQ. SYSTEM PSI/PTL	039	12S	10E	SURFICIAL CONFINING UNIT MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	0986	D	
051	-5081Z	JEFFERSON PAR E2-6	295814 901344	S.E. LA. AQ. SYSTEM PSI/PTL	039	12S	10E	SURFICIAL CONFINING UNIT MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	0986	D	
051	-5082Z	JEFFERSON PAR E2-7	295820 901340	S.E. LA. AQ. SYSTEM PSI/PTL	039	12S	10E	SURFICIAL CONFINING UNIT MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	0986	D	
051	-5083Z	JEFFERSON PAR E2-8	295827 901336	S.E. LA. AQ. SYSTEM PSI/PTL	039	12S	10E	SURFICIAL CONFINING UNIT MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	0986	D	
051	-5084Z	JEFFERSON PAR E2-9	295816 901339	S.E. LA. AQ. SYSTEM PSI/PTL	039	12S	10E	SURFICIAL CONFINING UNIT MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	0986	D	
051	-5085Z	HALLIBURTON MW-1	300228 901515	S.E. LA. AQ. SYSTEM GORE	037	12S	09E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	2 2-12	0986	D	W
051	-5086Z	TENNECO B-1	300059 901152	S.E. LA. AQ. SYSTEM GORE	044	12S	10E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5087Z	TENNECO B-2	300059 901152	S.E. LA. AQ. SYSTEM GORE	044	12S	10E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5088Z	TENNECO B-3	300059 901152	S.E. LA. AQ. SYSTEM GORE	044	12S	10E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5089Z	TENNECO B-4	300059 901152	S.E. LA. AQ. SYSTEM GORE	044	12S	10E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5090Z	TENNECO B-1	295936 901017	S.E. LA. AQ. SYSTEM GORE	045	12S	10E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5091Z	TENNECO B-2	295936 901017	S.E. LA. AQ. SYSTEM GORE	045	12S	10E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5092Z	TENNECO B-3	295936 901017	S.E. LA. AQ. SYSTEM GORE	045	12S	10E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5093Z	TENNECO B-4	295936 901017	S.E. LA. AQ. SYSTEM GORE	045	12S	10E	SURFICIAL CONFINING UNIT MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5094Z	TENNECO B-1	295745 901450	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	040	12S	10E	MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5095Z	TENNECO B-2	295745 901450	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	040	12S	10E	MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5096Z	TENNECO B-3	295746 901450	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	040	12S	10E	MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5097Z	TENNECO B-4	295745 901450	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	040	12S	10E	MONITOR	12 --	4 PLASTIC	4 2-12	0585	D	
051	-5098Z	HALLIBURTON MW-1	295631 901355	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	008	13S	22E	MONITOR	15 --	2 PLASTIC	2 10-15	0486	D	W
051	-5099Z	JEFFERSON PAR E2-10	295823 901343	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	1086	D	
051	-5100Z	JEFFERSON PAR E2-11	295814 901344	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	1086	D	
051	-5101Z	JEFFERSON PAR E2-13	295804 901350	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	1086	D	
051	-5102Z	JEFFERSON PAR E2-12	295806 901348	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	1086	D	
051	-5103Z	SHELL OIL HB-3	295802 900759	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	11E	MONITOR	8 --	2 PLASTIC	2 2-8	1086	D	W
051	-5104Z	SHELL OIL HB-4	295802 900759	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	11E	MONITOR	8 --	2 PLASTIC	2 2-8	1086	D	W
051	-5105Z	SHELL OIL M-1	295802 900759	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	11E	RECOVERY	30 --	4 PLASTIC	4 5-30	1086	D	W
051	-5106Z	SHELL OIL M-2	295802 900759	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	11E	RECOVERY	30 --	4 PLASTIC	4 5-30	1086	D	W
051	-5107Z	SHELL OIL M-3	295802 900759	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	11E	RECOVERY	30 --	4 PLASTIC	4 5-30	1086	D	W
051	-5108Z	SHELL OIL M-4	295802 900759	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	11E	RECOVERY	30 --	4 PLASTIC	4 5-30	1086	D	W
051	-5109Z	SHELL OIL HB-1	295802 900803	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIROM RES	038	12S	11E	MONITOR	6 PA					
051	-5110Z	SHELL OIL HB-2	295801 900804	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIROM RES	038	12S	11E	MONITOR	8 PA					

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	-5111Z	AMOCO OIL 1	295829 900905	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046 12S 10E	MONITOR	13 --	2 PLASTIC	2 3-13	1086	D W
051	-5112Z	AMOCO OIL 2	295829 900905	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046 12S 10E	MONITOR	13 --	2 PLASTIC	2 3-13	1086	D W
051	-5113Z	AMOCO OIL 3	295829 900905	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046 12S 10E	MONITOR	13 --	2 PLASTIC	2 3-13	1086	D W
051	-5114Z	AMOCO OIL 4	295829 900905	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046 12S 10E	MONITOR	13 --	2 PLASTIC	2 3-13	1086	D W
051	-5115Z	AMOCO OIL 5	295829 900905	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046 12S 10E	MONITOR	12 --	2 PLASTIC	2 2-12	1086	D W
051	-5116Z	AMOCO OIL 4	300018 901306	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	041 12S 10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D W
051	-5117Z	AMOCO OIL MW-1	295516 900207	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	015 13S 24E	MONITOR	12 PA	2 PLASTIC	2 2-12	0286	D W
051	-5118Z	AMOCO OIL MW-2	295516 900207	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	015 13S 24E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D W
051	-5119Z	AMOCO OIL MW-3	295516 900207	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	015 13S 24E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D W
051	-5120Z	AMOCO OIL MW-4	295516 900207	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	015 13S 24E	MONITOR	12 --	2 PLASTIC	2 2-12	1086	D W
051	-5121Z	AMOCO OIL 5	295516 900207	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	015 13S 24E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D
051	-5122Z	STILLEY, DENNIS MW-1	300057 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044 12S 10E	MONITOR	11 --	2 PLASTIC	2 1-10	1086	D W
051	-5123Z	STILLEY, DENNIS MW-2	300057 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044 12S 10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D W
051	-5124Z	STILLEY, DENNIS MW-3	300057 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044 12S 10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D W
051	-5125Z	STILLEY, DENNIS MW-4	300057 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044 12S 10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D W
051	-5126Z	STILLEY, DENNIS MW-5	300057 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044 12S 10E	MONITOR	11 PA	2 PLASTIC	2 1-11	1086	D W
051	-5127Z	AMOCO OIL OW-1	295941 901135	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044 12S 10E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5128Z	AMOCO OIL OW-2	295841 901135	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044	12S	10E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D	W
051	-5129Z	AMOCO OIL OW-3	295941 901135	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044	12S	10E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D	W
051	-5130Z	AMOCO OIL OW-4	295941 901135	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044	12S	10E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D	W
051	-5131Z	AMOCO OIL OW-5	295941 901135	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	044	12S	10E	MONITOR	11 PA	2 PLASTIC	2 1-11	1086	D	W
051	-5132Z	AMOCO OIL 1	295844 901325	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	039	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W
051	-5133Z	AMOCO OIL 2	295844 901325	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	039	12S	10E	MONITOR	14 --	2 PLASTIC	2 4-14	1086	D	W
051	-5134Z	AMOCO OIL 3	295844 901325	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	039	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W
051	-5135Z	AMOCO OIL 4	295844 901325	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	039	12S	10E	MONITOR	14 --	2 PLASTIC	2 4-14	1086	D	W
051	-5136Z	AMOCO OIL 5	295844 901325	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	039	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W
051	-5137Z	AMOCO OIL 1	295920 901251	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	041	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W
051	-5138Z	AMOCO OIL 2	295920 901251	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	041	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W
051	-5139Z	AMOCO OIL 3	295920 901251	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	041	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W
051	-5140Z	AMOCO OIL 4	295920 901251	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	041	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W
051	-5141Z	AMOCO OIL 5	295920 901251	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	041	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W
051	-5142Z	AMOCO OIL OW-1	300007 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	125	12S	11E	MONITOR	11 PA	2 PLASTIC	2 1-11	1086	D	W
051	-5143Z	AMOCO OIL OW-2	300007 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	125	12S	11E	MONITOR	11 PA	2 PLASTIC	2 1-11	1086	D	W
051	-5144Z	AMOCO OIL OW-3	300007 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	125	12S	11E	MONITOR	11 --	2 PLASTIC	2 1-11	1086	D	W

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO
051	-5145Z	AMOCO OIL OW-4	300007 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	125	12S	11E	MONITOR	11 PA	2 PLASTIC	2 1-11	1086	D W
051	-5146Z	AMOCO OIL OW-5	300007 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	125	12S	11E	MONITOR	11 PA	2 PLASTIC	2 1-11	1086	D W
051	-5147Z	AMOCO OIL OW-1	295747 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046	12S	10E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D W
051	-5148Z	AMOCO OIL OW-2	295747 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046	12S	10E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D W
051	-5149Z	AMOCO OIL OW-3	295747 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046	12S	10E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D
051	-5150Z	AMOCO OIL OW-4	295747 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046	12S	10E	MONITOR	12 PA	2 PLASTIC	2 2-12	1086	D W
051	-5151Z	AMOCO OIL OW-5	295747 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J & R DRILLING	046	12S	10E	MONITOR	13 PA	2 PLASTIC	2 2-12	1086	D W
051	-5152Z	TEXACO MW-12	295834 901121	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	12S	10E	MONITOR	15 --	4 PLASTIC	4 3-15	1286	D
051	-5153Z	TEXACO MW-13	295834 901121	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	12S	10E	MONITOR	15 --	4 PLASTIC	4 3-15	1286	D
051	-5154Z	TEXACO MW-14	295834 901121	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	12S	10E	MONITOR	15 --	4 PLASTIC	4 3-15	1286	D
051	-5155Z	CIRCLE K MW-2	300002 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	124	12S	11E	MONITOR	18 --	4 PLASTIC	4 2-17	0187	D
051	-5156Z	CIRCLE K MW-3	300002 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	124	12S	11E	MONITOR	18 --	4 PLASTIC	4 2-17	0187	D
051	-5157Z	CIRCLE K MW-4	300002 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	124	12S	11E	MONITOR	18 --	4 PLASTIC	4 2-17	0187	D
051	-5158Z	CIRCLE K MW-5	300002 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	124	12S	11E	MONITOR	13 --	5 PLASTIC	5 2-12	0187	D
051	-5159Z	CIRCLE K MW-2	295335 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	030	14S	24E	MONITOR	15 --	4 PLASTIC	4 1-15	0187	D
051	-5160Z	CIRCLE K MW-2	295225 900311	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	056	14S	24E	MONITOR	18 --	4 PLASTIC	4 3-18	0187	D
051	-5161Z	CIRCLE K MW-3	295225 900311	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	056	14S	24E	MONITOR	18 --	4 PLASTIC	4 1-16	0187	D

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	-5162Z	CIRCLE K MW-2	295947 901302	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-15	0187	D
051	-5163Z	CIRCLE K MW-3	295947 901302	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-15	0187	D
051	-5164Z	CIRCLE K MW-3	295336 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	030 14S 24E	MONITOR	11 --	PLASTIC	5 1-11	0187	D
051	-5165Z	CHARTER SER STA MW-4	295335 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	030 14S 24E	MONITOR	17 --	4 PLASTIC	4 2-16	0187	D
051	-5166Z	CIRCLE K MW-1	295947 901302	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT POPE	041 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-16	1186	D
051	-5167Z	CHARTER SER STA	300019 901517	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT POPE	124 12S 11E	MONITOR	17 --	4 PLASTIC	4 2-16	1186	D
051	-5168Z	CHARTER SER STA	295244 900308	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT POPE	056 14S 24E	MONITOR	17 --	4 PLASTIC	4 2-17	1186	D
051	-5169Z	CHARTER SER STA	295333 900110	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT POPE	030 14S 23E	MONITOR	16 --	4 PLASTIC	4 2-16	1186	D
051	-5170Z	CIRCLE K MW-1	295248 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034 14S 23E	MONITOR	15 --	4 PLASTIC	4 1-15	0287	D
051	-5171Z	CIRCLE K MW-2	295248 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034 14S 23E	MONITOR	15 --	4 PLASTIC	4 1-15	0287	D
051	-5172Z	CIRCLE K MW-4	295248 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034 14S 23E	MONITOR	15 --	4 PLASTIC	4 1-15	0287	D
051	-5173Z	CIRCLE K MW-3	295248 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034 14S 23E	MONITOR	16 --	4 PLASTIC	4 1-15	0287	D
051	-5174Z	KELE EXPLORATN MISSOURI 1	295445 900902	GRAMERCY AQUIFER GUICHARD	008 13S 23E	RIG SUPPLY	141 PA	4 PLASTIC	4 131-141	0387	D W
051	-5175Z	GUTHAMS, TONY	295717 901238	NO WELL MADE, LOG DEPTH SHOWN GILL (JACK)	037 13S 10E	HEAT PUMP	200 HH			1185	D
051	-5176Z	CIRCLE K MW-4	295225 900311	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	056 14S 24E	MONITOR	11 --	PLASTIC	5 1-11	0387	D
051	-5177Z	CIRCLE K MW-6	300002 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	124 12S 11E	MONITOR	17 --	4 PLASTIC	4 2-17	0387	D
051	-5178Z	EXXON CO USA MW-1	295939 901056	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 PA	4 PLASTIC	4 2-16	0487	D

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP	SECT	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5179Z	EXXON CO USA MW-2	295939 901056	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	04S	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0487	D	
051	-5180Z	EXXON CO USA MW-3	295939 901056	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	04S	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0487	D	
051	-5181Z	EXXON CO USA MW-4	295939 901056	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	04S	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0487	D	
051	-5182Z	EXXON CO USA MW-1	295413 900407	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	24E	MONITOR	16 EX	4 PLASTIC	4 1-16	0487	D	
051	-5183Z	EXXON CO USA MW-2	295413 900407	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	24E	MONITOR	16 PA	4 PLASTIC	4 1-16	0487	D	
051	-5184Z	EXXON CO USA MW-3	295413 900407	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	24E	MONITOR	16 EX	4 PLASTIC	4 1-16	0487	D	
051	-5185Z	CIRCLE K MW-7	300002 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	12	12S	11E	MONITOR	16 PA	4 PLASTIC	4 1-16	0587	D	W
051	-5186Z	CIRCLE K MW-8	300002 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	12	12S	11E	MONITOR	16 --	4 PLASTIC	4 1-16	0587	D	W
051	-5187Z	CIRCLE K MW-2	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	22E	MONITOR	16 --	4 PLASTIC	4 2-17	0587	D	
051	-5188Z	CIRCLE K MW-3	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	22E	MONITOR	16 --	4 PLASTIC	4 2-17	0587	D	
051	-5189Z	CIRCLE K MW-4	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	22E	MONITOR	16 --	4 PLASTIC	4 2-17	0587	D	
051	-5190Z	CIRCLE K MW-5	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	22E	MONITOR	16 --	4 PLASTIC	4 1-16	0587	D	
051	-5191Z	CIRCLE K MW-6	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	22E	MONITOR	10 --	PLASTIC	5 1-10	0587	D	
051	-5192Z	CIRCLE K MW-7	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	02	13S	22E	MONITOR	16 --	4 PLASTIC	4 2-17	0587	D	
051	-5193Z	GRETNA MACHINE B-1	295022 900320	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	06	14S	24E	MONITOR	27 PA	2 PLASTIC	2 22-27	0487	D	
051	-5194Z	GRETNA MACHINE B-2	295024 900321	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	06	14S	24E	MONITOR	27 PA			0487	D	
051	-5195Z	GRETNA MACHINE B-3	295026 900321	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	06	14S	24E	MONITOR	27 PA	2 PLASTIC	2 22-27	0487	D	

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER
REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	-5196Z	GRETNA MACHINE B-4	295026 900318	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	056 14S 24E	MONITOR	27 PA	2 PLASTIC	2 22-27	0487	D
051	-5197Z	GRETNA MACHINE B-5	295026 900316	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	056 14S 24E	MONITOR	27 PA	2 PLASTIC	2 22-27	0487	D
051	-5198Z	GRETNA MACHINE B-6	295025 900315	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	056 14S 24E	MONITOR	27 PA	2 PLASTIC	2 22-27	0487	D
051	-5199Z	GRETNA MACHINE B-7	295023 900317	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	056 14S 24E	MONITOR	23 PA	2 PLASTIC	2 18-23	0487	D
051	-5200Z	GRETNA MACHINE GM-1	295026 900318	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	056 14S 24E	MONITOR	25 --	2 STEEL	2 20-25	0587	D
051	-5201Z	GRETNA MACHINE GM-2	295024 900315	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	056 14S 24E	MONITOR	25 --	2 STEEL	2 20-25	0587	D
051	-5202Z	GRETNA MACHINE GM-3	295023 900317	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	056 14S 24E	MONITOR	23 --	2 STEEL	2 18-23	0587	D
051	-5203Z	GRETNA MACHINE GM-4	295023 900318	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	056 14S 24E	MONITOR	25 --	2 STEEL	2 20-25	0587	D
051	-5204Z	STAR ENTERPRISE MW-5R	300050 900936	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046 12S 10E	MONITOR	17 PA	4 PLASTIC	4 5-15	0492	D W
051	-5205Z	CONOCO MW-1	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0587	D
051	-5206Z	CONOCO MW-2	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0587	D
051	-5207Z	CONOCO MW-3	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0587	D
051	-5208Z	CONOCO MW-4	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	8 PA	4 PLASTIC	4 1-8	0587	D
051	-5209Z	CONOCO MW-5	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0587	D
051	-5210Z	CONOCO MW-6	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-11	0587	D
051	-5211Z	CONOCO MW-7	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	11 PA	4 PLASTIC	4 1-11	0587	D
051	-5212Z	CONOCO MW-8	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	11 PA	4 PLASTIC	4 1-11	0587	D

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5213Z	CONOCO MW-9	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0587	D	
051	-5214Z	CONOCO MW-10	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0587	D	
051	-5215Z	MOBIL OIL MW-1	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	20 PA	4 PLASTIC	4 10-20	1185	D	W
051	-5216Z	MOBIL OIL MW-2	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	10 PA	4 PLASTIC	4 2-10	1185	D	W
051	-5217Z	MOBIL OIL MW-3	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	15 EX	4 PLASTIC	4 2-15	1185	D	W
051	-5218Z	MOBIL OIL MW-4	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	15 EX	4 PLASTIC	4 2-15	1185	D	W
051	-5219Z	MOBIL OIL MW-5	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	24 EX	4 PLASTIC	4 2-24	0286	D	W
051	-5220Z	MOBIL OIL MW-6	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	24 EX	4 PLASTIC	4 2-22	0286	D	W
051	-5221Z	MOBIL OIL MW-7	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	24 EX	4 PLASTIC	4 2-24	0286	D	W
051	-5222Z	MOBIL OIL MW-8	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	7 EX	4 PLASTIC	4 5-7	0286	D	W
051	-5223Z	MOBIL OIL MW-9	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	24 EX	4 PLASTIC	4 2-24	0286	D	W
051	-5224Z	MOBIL OIL MW-11	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	15 EX	4 PLASTIC	4 2-15	0686	D	
051	-5225Z	MOBIL OIL MW-10	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	15 EX	4 PLASTIC	4 2-15	0686	D	
051	-5226Z	MOBIL OIL MW-12	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	16 PA	4 PLASTIC	4 2-16	1186	D	
051	-5227Z	MOBIL OIL MW-13	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	16 EX	4 PLASTIC	4 3-16	1186	D	
051	-5228Z	MOBIL OIL MW-14	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	043 12S 10E	MONITOR	16 PA	4 PLASTIC	4 3-16	1186	D	
051	-5229Z	WITCO CHEMICAL 1	295445 900436	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	001 13S 24E	MONITOR	20 PA			1181		

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP	RANGE	SECT	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5230Z	WITCO CHEMICAL 2	295443 900434	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	13S	24E	001	MONITOR	20 PA			1181		
051	-5231Z	WITCO CHEMICAL 3	295441 900432	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	13S	24E	001	MONITOR	20 PA			1181		
051	-5232Z	WITCO CHEMICAL 4	295438 900429	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	13S	24E	001	MONITOR	20 PA			1181		
051	-5233Z	EXXON CO USA MW-1	295233 900253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	14S	24E	084	MONITOR	16 --	4 PLASTIC	4 1-16	0987	D	
051	-5234Z	EXXON CO USA MW-2	295233 900253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	14S	24E	084	MONITOR	16 --	4 PLASTIC	4 1-16	0987	D	
051	-5235Z	EXXON CO USA MW-3	295233 900253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	14S	24E	084	MONITOR	16 --	4 PLASTIC	4 1-16	0987	D	
051	-5236Z	EXXON CO USA MW-5	295413 900407	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	11S	24E	002	MONITOR	13 EX	4 PLASTIC	4 1-13	1087	D	
051	-5237Z	SHELL OIL B-3	295609 901138	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	13S	10E	041	MONITOR	16 --	4 PLASTIC	4 1-16	1087	D	
051	-5238Z	WASTE MANAGE NR-1	295511 901525	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	13S	22E	038	MONITOR	20 --	2 PLASTIC	2 15-20	0987	D	W
051	-5239Z	WASTE MANAGE NR-2	295511 901525	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	13S	22E	038	MONITOR	20 --	2 PLASTIC	2 15-20	0987	D	W
051	-5240Z	WASTE MANAGE 8N	295511 901525	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	13S	22E	038	MONITOR	10 --	2 PLASTIC	2 7-10	0987	D	W
051	-5241Z	WASTE MANAGE 9N	295511 901525	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	13S	22E	038	MONITOR	20 --	2 PLASTIC	2 15-20	0987	D	W
051	-5242Z	WASTE MANAGE 10N	295511 901525	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	13S	22E	038	MONITOR	20 --	2 PLASTIC	2 15-20	0887	D	W
051	-5243Z	WASTE MANAGE 11N	295511 901525	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	13S	22E	038	MONITOR	20 --	2 PLASTIC	2 15-20	0887	D	W
051	-5244Z	WASTE MANAGE 12N	295511 901525	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	13S	22E	038	MONITOR	10 --	2 PLASTIC	2 7-10	0887	D	W
051	-5245Z	AMOCO OIL MW-2	300103 901424	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	12S	10E	038	MONITOR	10 PA	2 PLASTIC	2 1-10	1187	D	
051	-5246Z	AMOCO OIL MW-3	300103 901424	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	12S	10E	038	MONITOR	10 PA	2 PLASTIC	2 1-10	1187	D	

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5247Z	EXXON CO USA MW-4	295732 901058	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	12S	10E	MONITOR	12 --	8 PLASTIC	8 1-12	0188	D	
051	-5248Z	EXXON CO USA MW-5	295732 901058	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	12S	10E	MONITOR	16 --	4 PLASTIC	4 1-16	0188	D	
051	-5249Z	EXXON CO USA MW-6	295732 901058	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	12S	10E	MONITOR	12 --	4 PLASTIC	4 1-12	0188	D	
051	-5250Z	EXXON CO USA MW-7	295732 901058	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	12S	10E	MONITOR	16 --	4 PLASTIC	4 1-16	0188	D	
051	-5251Z	EXXON CO USA MW-8	295732 901058	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	12S	10E	MONITOR	16 --	4 PLASTIC	4 1-16	0188	D	
051	-5252Z	JEFFERSON PAR E2-14	295803 901350	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	30 PA	1.25 PLASTIC	1.25 25-30	1186	D	
051	-5253Z	JEFFERSON PAR E2-15	295802 901349	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	30 PA	1.25 PLASTIC	1.25 25-30	1186	D	
051	-5254Z	JEFFERSON PAR E2-16	295803 901351	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	30 PA	1.25 PLASTIC	1.25 25-30	1186	D	
051	-5255Z	JEFFERSON PAR E2-17	295800 901353	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	1186		
051	-5256Z	JEFFERSON PAR E2-18	295758 901354	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	20 PA	1.25 PLASTIC	1.25 15-20	1186	D	
051	-5257Z	AMOCO OIL OW-5	300018 901303	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	12S	10E	MONITOR	16 --	2 PLASTIC	2 1-16	0288	D	W
051	-5258Z	RIVER RIDGE F M OW-6	295843 901316	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	16 --	2 PLASTIC	2 1-16	0288	D	W
051	-5259Z	AMOCO OIL OW-4	295942 900826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	050	12S	10E	MONITOR	16 --	2 PLASTIC	2 1-16	0288	D	W
051	-5260Z	BFI W-5	295440 901533	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039	13S	22E	MONITOR	40 PA	2 PLASTIC	2 35-40	0887	D	W
051	-5261Z	PHILLIPS PETRO OW-6	295942 900826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	050	12S	10E	MONITOR	16 PA	2 PLASTIC	2 1-16	0288	D	W
051	-5262Z	AMOCO OIL OW-6	295833 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	025	12S	10E	MONITOR	16 --	2 PLASTIC	2 1-16	0388	D	W
051	-5263Z	AMOCO OIL OW-7	295833 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	025	12S	10E	MONITOR	16 --	2 PLASTIC	2 1-16	0388	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO
051	-5264Z	AMOCO OIL OW-8	295833 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	025	12S	10E	MONITOR	16 --	2 PLASTIC	2 1-16	0288	D W
051	-5265Z	AMOCO OIL OW-1	295942 900826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	047	12S	10E	MONITOR	12 PA				
051	-5266Z	AMOCO OIL OW-2	295942 900826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	047	12S	10E	MONITOR	12 PA				
051	-5267Z	AMOCO OIL OW-3	295942 900826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	047	12S	10E	MONITOR	12 PA				
051	-5268Z	AMOCO OIL OW-1	295833 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	046	12S	10E	MONITOR	12 PA				
051	-5269Z	AMOCO OIL OW-2	295833 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	046	12S	10E	MONITOR	12 PA				
051	-5270Z	AMOCO OIL OW-3	295833 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	046	12S	10E	MONITOR	12 PA				
051	-5271Z	AMOCO OIL OW-5	295833 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN				MONITOR	12 PA				
051	-5272Z	RIVER RIDGE F M OW-1	295843 901316	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	038	12S	10E	MONITOR	12 PA				
051	-5273Z	AMOCO OIL OW-4	300018 901303	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	041	12S	10E	MONITOR	12 PA				
051	-5274Z	UNION PACIFIC MW-1	295502 901141	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	025	13S	22E	MONITOR	25 PA	4 PLASTIC	4 20-25	0588	D
051	-5275Z	UNION PACIFIC MW-2	295505 901140	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	025	13S	22E	MONITOR	25 PA	4 PLASTIC	4 20-25	0588	D
051	-5276Z	UNION PACIFIC MW-3	295505 901142	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	025	13S	22E	MONITOR	25 PA	4 PLASTIC	4 20-25	0588	D
051	-5277Z	SOUTHLAND CORP MW-1	295548 900959	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	002	13S	23E	MONITOR	15 PA	2 PLASTIC	2 3-13	0688	D W
051	-5278Z	EXXON CO USA MW-1	295941 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044	12S	10E	MONITOR	13 --	2 PLASTIC	2 3-13	0588	D
051	-5279Z	EXXON CO USA MW-1	295825 900742	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	030	12S	11E	MONITOR	13 --	2 PLASTIC	2 3-13	0688	D
051	-5280Z	EXXON CO USA MW-2	295825 900742	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	030	12S	11E	MONITOR	13 --	2 PLASTIC	2 3-13	0688	D

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5281Z	EXXON CO USA MW-3	295826 900742	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	030	12S	11E	MONITOR	13 --	2 PLASTIC	2 3-13	0688	D	
051	-5282Z	BFI N-1	295440 901540	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039	13S	22E	MONITOR	30 PA	2 PLASTIC	2 25-30	1087	D	W
051	-5283Z	CHEVRON MW-1	295840 901501	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042	13S	09E	MONITOR	17 PA	4 PLASTIC	4 2-17	0688	D	W
051	-5284Z	CHEVRON MW-2	295840 901501	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042	13S	09E	MONITOR	17 --	4 PLASTIC	4 2-17	0688	D	W
051	-5285Z	CHEVRON MW-3	295840 901501	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042	13S	09E	MONITOR	17 PA	4 PLASTIC	4 2-17	0688	D	W
051	-5286Z	CHEVRON MW-4	295840 901501	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042	13S	09E	MONITOR	17 PA	4 PLASTIC	4 2-17	0688	D	W
051	-5287Z	OAKWOOD SHOPPIN 1	295500 900215	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	015	13S	24E	MONITOR	12 --	2 PLASTIC	2 2-12	0688	D	W
051	-5288Z	OAKWOOD SHOPPIN 2	295500 900215	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	015	13S	24E	MONITOR	12 --	2 PLASTIC	2 2-12	0688	D	W
051	-5289Z	OAKWOOD SHOPPIN 3	295500 900215	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	015	13S	24E	MONITOR	12 --	2 PLASTIC	2 2-12	0688	D	W
051	-5290Z	EXXON CO USA MW-1	295345 900654	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	006	14S	23E	MONITOR	15 EX	4 PLASTIC	4 2-15	0788	D	
051	-5291Z	EXXON CO USA MW-2	295345 900654	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	006	14S	23E	MONITOR	15 --	4 PLASTIC	4 2-15	0788	D	
051	-5292Z	EXXON CO USA MW-3	295345 900654	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	006	14S	23E	MONITOR	15 --	4 PLASTIC	4 2-15	0788	D	
051	-5293Z	EXXON CO USA MW-4	295345 900654	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	006	14S	23E	MONITOR	15 --	4 PLASTIC	4 2-15	0788	D	
051	-5294Z	EXXON CO USA MW-5	295345 900654	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	006	14S	23E	MONITOR	15 --	4 PLASTIC	4 2-15	0788	D	
051	-5295Z	SHELL OIL MW-7	295856 901314	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039	12S	10E	MONITOR	14 --	2 PLASTIC	2 1-14	0988	D	W
051	-5296Z	CHEVRON MW-1	295354 900053	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	017	13S	24E	MONITOR	17 --	4 PLASTIC	4 2-17	0988	D	W
051	-5297Z	CHEVRON MW-2	295354 900053	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	017	13S	24E	MONITOR	17 --	4 PLASTIC	4 2-17	0988	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5298Z	CHEVRON MW-3	295354 900053	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	017 13S 24E	MONITOR	17 --	4 PLASTIC	4 2-17	0988	D	W
051	-5299Z	CHEVRON MW-4	295354 900053	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	017 13S 24E	MONITOR	17 --	4 PLASTIC	4 2-17	0988	D	W
051	-5300Z	PHILLIPS 66 MW-1	295902 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	050 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0988	D	W
051	-5301Z	PHILLIPS 66 MW-2	295902 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	050 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0988	D	W
051	-5302Z	PHILLIPS 66 MW-3	295902 900906	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	050 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0988	D	W
051	-5303Z	TEXACO MW-1	300005 900824	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 10E	MONITOR	17 -D	4 PLASTIC	4 2-17	0988	D	W
051	-5304Z	TEXACO MW-2	300005 900824	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 10E	MONITOR	17 -D	4 PLASTIC	4 2-17	0988	D	W
051	-5305Z	TEXACO MW-3	300005 900824	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 10E	MONITOR	17 -D	4 PLASTIC	4 2-17	0988	D	W
051	-5306Z	TEXACO MW-4	300005 900824	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 10E	MONITOR	17 -D	4 PLASTIC	4 2-17	0988	D	W
051	-5307Z	TEXACO MW-5	300005 900824	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 10E	MONITOR	17 -D	4 PLASTIC	4 2-17	0988	D	W
051	-5308Z	TEXACO MW-6	300005 900824	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 10E	MONITOR	17 -D	4 PLASTIC	4 2-17	0988	D	W
051	-5309Z	TEXACO MW-7	300011 901346	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 12S 10E	MONITOR	12 --	2 PLASTIC	2 2-12	0988	D	W
051	-5310Z	TEXACO MW-8	300011 901346	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 12S 10E	MONITOR	12 --	2 PLASTIC	2 2-12	0988	D	W
051	-5311Z	SOUTHLAND CORP MW-1	295831 901148	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	
051	-5312Z	SOUTHLAND CORP MW-2	295831 901148	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	
051	-5313Z	SOUTHLAND CORP MW-3	295831 901148	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	
051	-5314Z	SOUTHLAND CORP MW-1	295942 901436	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042 12S 09E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5315Z	SOUTHLAND CORP MW-2	295942 / 901436	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	042	12S	09E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	
051	-5316Z	SOUTHLAND CORP MW-3	295942 / 901436	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	042	12S	09E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	
051	-5317Z	DELTA COMMODITE S1	295430 / 900509	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	022	13S	23E	MONITOR	20 --	4 PLASTIC	4 10-20	0694	D	W
051	-5318Z	DELTA COMMODITE S4	295426 / 900520	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	022	13S	23E	MONITOR	20 --	4 PLASTIC	4 10-20	0694	D	W
051	-5319Z	DELTA COMMODITE S5	295430 / 900521	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	022	13S	23E	MONITOR	20 --	4 PLASTIC	4 10-20	0694	D	W
051	-5320Z	SOUTHLAND CORP MW-1	295328 / 900702	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	007	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	W
051	-5321Z	SOUTHLAND CORP MW-2	295328 / 900702	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	007	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	W
051	-5322Z	SOUTHLAND CORP MW-3	295328 / 900702	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	007	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	W
051	-5323Z	SOUTHLAND CORP MW-4	295328 / 900702	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	007	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	W
051	-5324Z	SOUTHLAND CORP MW-5	295328 / 900702	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	007	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	W
051	-5325Z	TOC RETAIL MW-7	300051 / 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	046	12S	10E	MONITOR	13 --	4 PLASTIC	4 3-13	1092	D	W
051	-5326Z	AMOCO OIL MW-6	295516 / 900207	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	015	13S	24E	MONITOR	15 --	4 PLASTIC	4 2-15	1188	D	W
051	-5327Z	AMOCO OIL MW-7	295516 / 900207	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	015	13S	24E	MONITOR	15 --	4 PLASTIC	4 2-15	1188	D	W
051	-5328Z	BFI N-2	295438 / 901533	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	039	13S	22E	MONITOR	41 PA	2 PLASTIC	2 36-41	0887	D	W
051	-5329Z	BFI N-3	295438 / 901530	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	039	13S	22E	MONITOR	36 PA	2 PLASTIC	2 31-36	0887	D	W
051	-5330Z	BFI N-4	295438 / 901527	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	039	13S	22E	MONITOR	41 PA	2 PLASTIC	2 36-41	0887	D	W
051	-5331Z	EXXON CO USA MW-1	295903 / 901246	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / PSI/PTL	041	12S	10E	MONITOR	15 EX	4 PLASTIC	4 2-15	1188	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5332Z	EXXON CO USA MW-2	295903 901246	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	12S	10E	MONITOR	15 EX	4 PLASTIC	4 2-15	1188	D	W
051	-5333Z	EXXON CO USA MW-3	295903 901246	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	12S	10E	MONITOR	15 EX	4 PLASTIC	4 2-15	1188	D	W
051	-5334Z	EXXON CO USA MW-4	295903 901246	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	12S	10E	MONITOR	15 EX	4 PLASTIC	4 2-15	1188	D	W
051	-5335Z	EXXON CO USA MW-6	295335 900652	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	15 --	4 PLASTIC	4 2-15	1088	D	W
051	-5336Z	EXXON CO USA MW-7	295335 900652	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	15 --	4 PLASTIC	4 2-15	1088	D	W
051	-5337Z	EXXON CO USA MW-8	295335 900652	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	15 --	4 PLASTIC	4 2-15	1088	D	W
051	-5338Z	EXXON CO USA MW-9	295335 900652	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	15 --	4 PLASTIC	4 2-15	1088	D	W
051	-5339Z	EXXON CO USA MW-10	295335 900652	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	1088	D	W
051	-5340Z	EXXON CO USA MW-11	295335 900652	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	1088	D	W
051	-5341Z	SOUTHLAND CORP MW-1	295548 900959	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	002	13S	23E	MONITOR	10 PA	PLASTIC	4 1-10	0988	D	W
051	-5342Z	SOUTHLAND CORP MW-2	295548 900959	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	002	13S	23E	MONITOR	10 PA	PLASTIC	4 1-10	0988	D	W
051	-5343Z	SOUTHLAND CORP MW-3	295548 900959	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	002	13S	23E	MONITOR	10 PA	PLASTIC	4 1-10	0988	D	W
051	-5344Z	SOUTHLAND CORP MW-4	295548 900959	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	002	13S	23E	MONITOR	10 PA	PLASTIC	4 1-10	0988	D	W
051	-5345Z	SOUTHLAND CORP MW-5	295548 900959	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	002	13S	23E	MONITOR	10 PA	PLASTIC	4 1-10	0988	D	W
051	-5346Z	SOUTHLAND CORP MW-6	295548 900959	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	002	13S	23E	MONITOR	10 PA	PLASTIC	4 1-10	0988	D	W
051	-5347Z	CHEVRON MW-1	295947 901428	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0189	D	
051	-5348Z	CHEVRON MW-2	295947 901428	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0189	D	

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5349Z	CHEVRON MW-3	295947 901428	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0189	D	
051	-5350Z	CHEVRON MW-4	295947 901428	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0189	D	
051	-5351Z	TEXACO MW-1	295907 900808	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	047	12S	10E	MONITOR	14 --	4 PLASTIC	4 1-14	0189	D	W
051	-5352Z	SCHWEGMANN TW-1	295414 900403	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	002	13S	24E	MONITOR	6 --	2 PLASTIC	2 2-5	0291	D	W
051	-5353Z	SCHWEGMANN TW-2	295414 900403	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	002	13S	24E	MONITOR	10 --	2 PLASTIC	2 2-10	0291	D	W
051	-5354Z	SCHWEGMANN TW-3	295414 900403	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	002	13S	24E	MONITOR	10 --	2 PLASTIC	2 2-10	0291	D	W
051	-5355Z	GENERAL CHEM MW-7	295401 900705	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	016	13S	23E	MONITOR	16 --	2 PLASTIC	2 6-16	0794	D	W
051	-5356Z	GENERAL CHEM MW-8	295404 900655	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	016	13S	23E	MONITOR	16 --	2 PLASTIC	2 6-16	0794	D	W
051	-5357Z	WEST SIDE OIL MW-1	295755 901030	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044	12S	10E	MONITOR	13 --	2 PLASTIC	2 1-13	0189	D	
051	-5358Z	WEST SIDE OIL MW-2	295755 901030	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044	12S	10E	MONITOR	13 --	2 PLASTIC	2 1-13	0189	D	
051	-5359Z	WEST SIDE OIL MW-3	295755 901030	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044	12S	10E	MONITOR	13 --	2 PLASTIC	2 1-13	0189	D	
051	-5360Z	CANLAN OIL SOUTHERN 1	295437 901140	GRAMERCY AQUIFER RIG WATER	026	13S	22E	RIG SUPPLY	190 --	4 PLASTIC	4 180-190	0389	D	W
051	-5361Z	COCA-COLA MW-1	295637 901130	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	13S	10E	MONITOR	14 PA	4 PLASTIC	4 1-13	0289	D	
051	-5362Z	TOC RETAIL MW-1	300020 901330	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038	12S	10E	MONITOR	12 --	2 PLASTIC	2 4-12	0389	D	W
051	-5363Z	TOC RETAIL MW-1	295740 900835	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	047	12S	10E	MONITOR	10 --	2 PLASTIC	2 3-10	0289	D	W
051	-5364Z	TOC RETAIL MW-2	295740 900835	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	047	12S	10E	MONITOR	10 --	2 PLASTIC	2 3-10	0289	D	W
051	-5365Z	TOC RETAIL MW-1	295340 900800	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	002	14S	23E	MONITOR	16 --	2 PLASTIC	2 5-15	0289	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5366Z	TOC RETAIL MW-2	295340 900600	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	002 14S 23E	MONITOR	16 --	2 PLASTIC	2 5-15	0289	D	W
051	-5367Z	TOC RETAIL MW-1	295400 900150	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	031 14S 24E	MONITOR	16 --	2 PLASTIC	2 5-15	0289	D	W
051	-5368Z	TOC RETAIL MW-2	295400 900150	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	031 14S 24E	MONITOR	14 --	2 PLASTIC	2 4-14	0289	D	W
051	-5369Z	TOC RETAIL MW-1	295730 901030	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	044 12S 10E	MONITOR	10 --	2 PLASTIC	2 3-10	0289	D	W
051	-5370Z	TOC RETAIL MW-2	295730 901030	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	044 12S 10E	MONITOR	10 --	2 PLASTIC	2 3-10	0289	D	W
051	-5371Z	TOC RETAIL MW-1	295410 900315	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	006 13S 24E	MONITOR	14 --	2 PLASTIC	2 4-14	0289	D	W
051	-5372Z	TOC RETAIL MW-2	295410 900315	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	006 13S 24E	MONITOR	14 --	2 PLASTIC	2 4-14	0289	D	W
051	-5373Z	TOC RETAIL MW-1	295222 900405	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	056 14S 24E	MONITOR	14 --	2 PLASTIC	2 4-14	0289	D	W
051	-5374Z	TOC RETAIL MW-2	295220 900405	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	056 14S 24E	MONITOR	14 --	2 PLASTIC	2 4-14	0289	D	W
051	-5375Z	TOC RETAIL MW-9	295610 901150	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	040 13S 10E	MONITOR	12 --	2 PLASTIC	2 6-11	0289	D	W
051	-5376Z	TOC RETAIL MW-10	295610 901150	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	040 13S 10E	MONITOR	12 --	2 PLASTIC	2 7-12	0289	D	W
051	-5377Z	TOC RETAIL MW-1	295350 900820	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	012 14S 23E	MONITOR	14 --	2 PLASTIC	2 4-12	0289	D	W
051	-5378Z	TOC RETAIL MW-2	295350 900820	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	012 14S 23E	MONITOR	16 --	2 PLASTIC	2 6-15	0289	D	W
051	-5379Z	TOC RETAIL MW-1	300110 901420	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 10E	MONITOR	10 PA	2 PLASTIC	2 3-10	0189	D	W
051	-5380Z	TOC RETAIL MW-2	300110 901420	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 10E	MONITOR	12 PA	2 PLASTIC	2 3-12	0189	D	W
051	-5381Z	TOC RETAIL MW-1	295400 900425	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	044 14S 24E	MONITOR	14 --	2 PLASTIC	2 4-13	0289	D	W
051	-5382Z	TOC RETAIL MW-2	295400 900425	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	044 14S 24E	MONITOR	14 --	2 PLASTIC	2 4-13	0289	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5383Z	TOC RETAIL MW-1	300000 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	123	12S	11E	MONITOR	12 EX	2 PLASTIC	2 4-12	0289	D	W
051	-5384Z	TOC RETAIL MW-2	300000 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	123	12S	11E	MONITOR	12 EX	2 PLASTIC	2 4-12	0289	D	W
051	-5385Z	TOC RETAIL MW-1	300050 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	046	12S	10E	MONITOR	10 --	2 PLASTIC	2 3-10	0189	D	W
051	-5386Z	TOC RETAIL MW-2	300050 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	046	12S	10E	MONITOR	10 --	2 PLASTIC	2 3-10	0189	D	W
051	-5387Z	SHELL OIL H2	300006 900811	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (AL)	125	12S	11E	MONITOR	15 --	PLASTIC	4 1-15	0489	D	W
051	-5388Z	SHELL OIL P1	295912 900735	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (AL)	030	12S	11E	MONITOR	15 --	4 PLASTIC	4 2-15	0489	D	W
051	-5389Z	SHELL OIL J2	295724 900948	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (AL)	044	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-15	0489	D	W
051	-5390Z	SHELL OIL J4	295724 900948	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (AL)	044	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-15	0489	D	W
051	-5391Z	U S COAST GUARD MW-1	291556 895728	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	031	21S	25E	MONITOR	8 --	2 PLASTIC	2 3-8	0389	D	
051	-5392Z	U S COAST GUARD MW-2	291555 895729	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	031	21S	25E	MONITOR	8 --	2 PLASTIC	2 3-8	0389	D	
051	-5393Z	U S COAST GUARD MW-3	291554 895728	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	031	21S	25E	MONITOR	8 --	2 PLASTIC	2 3-8	0389	D	
051	-5394Z	BFI N-5	295438 901509	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039	13S	22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0887	D	W
051	-5395Z	BFI N-6A	295436 901513	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039	13S	22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0887	D	W
051	-5396Z	BFI N-61	295433 901517	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039	13S	22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0887	D	W
051	-5397Z	BFI N-7	295429 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039	13S	22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0887	D	W
051	-5398Z	BFI N-71	295425 901528	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039	13S	22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0987	D	W
051	-5399Z	SHELL OIL 6	295811 900754	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CRAWFORD	038	12S	11E	MONITOR	13 PA			0582		

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5400Z	EMRO MARKETING MW-6	295950 901428	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	038 12S 10E	MONITOR	13 --	4 PLASTIC	4 3-13	0794	D	W
051	-5401Z	EMRO MARKETING MW-7	295951 901428	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	038 12S 10E	MONITOR	13 --	4 PLASTIC	4 3-13	0794	D	W
051	-5402Z	EMRO MARKETING MW-8	295951 901427	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	038 12S 10E	MONITOR	13 --	4 PLASTIC	4 3-13	0794	D	W
051	-5403Z	EMRO MARKETING MW-9	295951 901427	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	038 12S 10E	MONITOR	13 --	4 PLASTIC	4 3-13	0794	D	W
051	-5404Z	CHEVRON MW-1	295605 901240	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039 13S 10E	MONITOR	16 --	2 PLASTIC	2 1-16	0489	D	W
051	-5405Z	CHEVRON MW-2	295605 901240	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039 13S 10E	MONITOR	16 --	2 PLASTIC	2 1-16	0489	D	W
051	-5406Z	CHEVRON MW-3	295605 901240	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039 13S 10E	MONITOR	16 --	2 PLASTIC	2 1-16	0489	D	W
051	-5407Z	CHEVRON MW-1	300006 900817	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 11E	MONITOR	16 PA	2 PLASTIC	2 1-16	0689	D	
051	-5408Z	CHEVRON MW-2	300006 900817	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 11E	MONITOR	16 PA	2 PLASTIC	2 1-16	0689	D	
051	-5409Z	CHEVRON MW-3	300006 900817	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 11E	MONITOR	16 PA	2 PLASTIC	2 1-16	0689	D	
051	-5410Z	CHEVRON MW-4	300006 900817	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	023 12S 11E	MONITOR	16 PA	2 PLASTIC	2 1-16	0689	D	
051	-5411Z	GRETNA, LA MW-1	295335 900238	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	047 14S 24E	MONITOR	28 --	4 PLASTIC	4 8-28	1088	D	W
051	-5412Z	GRETNA, LA MW-2	295339 900232	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	047 14S 24E	MONITOR	27 --	4 PLASTIC	4 7-27	1088	D	W
051	-5413Z	GRETNA, LA MW-3	295332 900234	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	047 14S 24E	MONITOR	28 --	4 PLASTIC	4 8-28	1088	D	W
051	-5414Z	SHELL OIL MW-59	295804 900756	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 11E	MONITOR	15 --	4 PLASTIC	4 5-15	0689	D	
051	-5415Z	SHELL OIL MW-60	295804 900756	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 11E	MONITOR	15 --	4 PLASTIC	4 5-15	0689	D	
051	-5416Z	SHELL OIL MW-2	295758 900816	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	037 12S 11E	MONITOR	15 PA					

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5417Z	SHELL OIL MW-3	295759 900807	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	038	12S	11E	MONITOR	15 PA					
051	-5418Z	SHELL OIL MW-11	295759 900812	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	037	12S	11E	MONITOR	15 PA					
051	-5419Z	SHELL OIL MW-8	295759 900812	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	037	12S	11E	MONITOR	15 PA					
051	-5420Z	SHELL OIL MW-12	295801 900815	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	037	12S	11E	MONITOR	15 PA					
051	-5421Z	SHELL OIL MW-13	295801 900815	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	033	12S	11E	MONITOR	15 PA					
051	-5422Z	SHELL OIL MW-15	295758 900814	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	037	12S	11E	MONITOR	15 PA					
051	-5423Z	SHELL OIL MW-17	295719 900809	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	038	12S	11E	MONITOR	15 PA					
051	-5424Z	SAFETY-KLEEN MW-1	300008 901644	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	085	12S	09E	MONITOR	13 --	4 PLASTIC	4 3-13	0689	D	
051	-5425Z	SAFETY-KLEEN MW-2	300008 901644	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	085	12S	09E	MONITOR	13 --	4 PLASTIC	4 3-13	0689	D	W
051	-5426Z	SAFETY-KLEEN P-2A	300008 901644	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	085	12S	09E	MONITOR	40 --	2 PLASTIC	2 30-40	0689	D	W
051	-5427Z	SAFETY-KLEEN MW-3	300008 901644	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	085	12S	09E	MONITOR	13 --	4 PLASTIC	4 3-13	0689	D	W
051	-5428Z	SAFETY-KLEEN MW-4	300008 901644	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	085	12S	09E	MONITOR	13 PA	4 PLASTIC	4 3-13	0689	D	W
051	-5429Z	SHELL OIL MW-54	295804 900807	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	11E	MONITOR	24 --	4 PLASTIC	4 14-24	0689	D	
051	-5430Z	SHELL OIL MW-55	295803 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	11E	MONITOR	15 --	4 PLASTIC	4 5-15	0589	D	
051	-5431Z	SHELL OIL MW-56	295803 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	11E	MONITOR	19 --	4 PLASTIC	4 9-19	0689	D	
051	-5432Z	SHELL OIL MW-57	295759 900802	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	11E	MONITOR	8 PA	4 PLASTIC	4 3-8	0689	D	
051	-5433Z	SHELL OIL MW-58	295759 900802	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	11E	MONITOR	8 PA	4 PLASTIC	4 3-8	0689	D	

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5434Z	SHELL OIL MW-61	295804 900800	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	11E	MONITOR	15 --	4 PLASTIC	4 5-10	0689	D	
051	-5435Z	SHELL OIL MW-62	295804 900800	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	11E	MONITOR	15 --	4 PLASTIC	4 5-10	0689	D	
051	-5436Z	EQUITABLE PETRO CHURCHIL 2	295337 901053	GRAMERCY AQUIFER RIG WATER	020	14S	23E	RIG SUPPLY	270 PA	4 PLASTIC	4 250-270	0889	D	W
051	-5437Z	EXXON CO USA MW-1	295904 901247	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	12S	10E	MONITOR	14 PA	4 PLASTIC	4 1-13	0789	D	
051	-5438Z	EXXON CO USA MW-2	295904 901247	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	12S	10E	MONITOR	14 PA	4 PLASTIC	4 1-13	0789	D	
051	-5439Z	EXXON CO USA MW-3	295904 901247	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	12S	10E	MONITOR	14 PA	4 PLASTIC	4 1-13	0789	D	
051	-5440Z	EXXON CO USA MW-4	295904 901247	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041	12S	10E	MONITOR	14 PA	4 PLASTIC	4 1-13	0789	D	
051	-5441Z	SOUTHLAND CORP MW-9	295337 900700	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	16 --	2 PLASTIC	2 1-16	0889	D	W
051	-5442Z	SOUTHLAND CORP MW-10	295337 900700	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	16 --	2 PLASTIC	2 1-16	0889	D	W
051	-5443Z	SOUTHLAND CORP MW-11	295337 900700	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	12 --	2 PLASTIC	2 2-12	0889	D	W
051	-5444Z	SOUTHLAND CORP MW-12	295337 900700	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	16 --	2 PLASTIC	2 1-16	0889	D	W
051	-5445Z	AMOCO OIL OW-1	300017 901308	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	041	12S	09E	MONITOR	15 PA					
051	-5446Z	AMOCO OIL OW-2	300017 901308	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	041	12S	09E	MONITOR	15 PA					
051	-5447Z	AMOCO OIL OW-3	300017 901308	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	041	12S	09E	MONITOR	15 PA					
051	-5448Z	AMOCO OIL OW-5	300017 901308	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	041	12S	09E	MONITOR	15 PA					
051	-5449Z	SHELL OIL W-10	295901 901548	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	037	12S	09E	MONITOR	16 --	4 PLASTIC	4 1-16	1092	D	W
051	-5450Z	SHELL OIL W-11	295901 901548	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	037	12S	09E	MONITOR	16 --	4 PLASTIC	4 1-16	1092	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5451Z	JEFFERSON PAR MW-4	295455 900400	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	004	13S	24E	MONITOR	17 --	4 PLASTIC	4 2-17	1182	D	W
051	-5452Z	AMOCO OIL OW-5	295745 900933	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	046	12S	10E	MONITOR	15 PA					
051	-5453Z	AMOCO OIL OW-6	295745 900933	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	046	12S	10E	MONITOR	15 PA					
051	-5454Z	AMOCO OIL OW-7	295745 900933	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	046	12S	10E	MONITOR	15 PA					
051	-5455Z	EXXON CO USA MW-1	295745 900825	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	047	12S	10E	MONITOR	13 PA	2 PLASTIC	2 1-13	1092	D	W
051	-5456Z	EXXON CO USA MW-2	295745 900825	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	047	12S	10E	MONITOR	13 PA	2 PLASTIC	2 1-13	1092	D	W
051	-5457Z	EXXON CO USA MW-3	295745 900825	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	047	12S	10E	MONITOR	13 PA	2 PLASTIC	2 1-13	1092	D	W
051	-5458Z	EXXON CO USA MW-4	295745 900825	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	047	12S	10E	MONITOR	13 PA	2 PLASTIC	2 1-13	1092	D	W
051	-5459Z	SHELL OIL MW-4R	300009 900920	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	046	12S	10E	MONITOR	14 --	4 PLASTIC	4 4-14	1292	D	W
051	-5460Z	SHELL OIL MW-5	300009 900920	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	046	12S	10E	MONITOR	12 --	4 PLASTIC	4 2-12	1292	D	W
051	-5461Z	SHELL OIL MW-6	300009 900920	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	046	12S	10E	MONITOR	13 --	4 PLASTIC	4 3-13	1292	D	W
051	-5462Z	SHELL OIL MW-7	300009 900920	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	046	12S	10E	MONITOR	12 --	4 PLASTIC	4 2-12	1292	D	W
051	-5463Z	JF HEALTHCARE SB-6	295744 900909	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	046	12S	10E	MONITOR	8 --	2 PLASTIC	2 1-8	1292	D	W
051	-5464Z	JF HEALTHCARE SB-7	295744 900909	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	046	12S	10E	MONITOR	8 --	2 PLASTIC	2 1-8	1292	D	W
051	-5465Z	CHEVRON MW-1	300019 901228	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042	12S	10E	MONITOR	16 --	4 PLASTIC	4 1-16	1089	D	W
051	-5466Z	CHEVRON MW-2	300019 901228	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042	12S	10E	MONITOR	16 --	4 PLASTIC	4 1-16	1089	D	W
051	-5467Z	CHEVRON MW-3	300019 901228	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042	12S	10E	MONITOR	16 --	4 PLASTIC	4 1-16	1089	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5468Z	CHEVRON MW-4	300019 901228	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	042 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	1089	D	W
051	-5469Z	BERWICK BAY OIL MW-1	295423 900315	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	050 13S 24E	MONITOR	14 --	4 PLASTIC	4 1-14	1089	D	W
051	-5470Z	BERWICK BAY OIL MW-2	295423 900315	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	050 13S 24E	MONITOR	14 --	4 PLASTIC	4 1-14	1089	D	W
051	-5471Z	CONOCO MW-11	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046 12S 10E	MONITOR	15 PA	4 PLASTIC	4 5-15	1189	D	W
051	-5472Z	TOC RETAIL AB-1	300110 901422	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038 12S 10E	MONITOR	10 PA	PLASTIC	4 1-10	0989	D	W
051	-5473Z	TOC RETAIL AB-2	300110 901422	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038 12S 10E	MONITOR	10 PA	PLASTIC	4 1-10	0989	D	W
051	-5474Z	TOC RETAIL AB-3	300110 901422	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038 12S 10E	MONITOR	10 PA	PLASTIC	4 1-10	0989	D	W
051	-5475Z	TOC RETAIL AB-6	300110 901422	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038 12S 10E	MONITOR	10 PA	PLASTIC	4 1-10	0989	D	W
051	-5476Z	TOC RETAIL AB-7	300110 901422	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038 12S 10E	MONITOR	10 PA	PLASTIC	4 1-10	0989	D	W
051	-5477Z	TOC RETAIL MW-3	300007 900732	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	123 12S 11E	MONITOR	12 --	2 PLASTIC	2 2-12	1089	D	W
051	-5478Z	TOC RETAIL MW-4	300007 900732	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	123 12S 11E	MONITOR	12 EX	2 PLASTIC	2 2-12	1089	D	W
051	-5479Z	NATIONAL TEA CO MW-1	295704 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 13S 10E	MONITOR	15 --	2 PLASTIC	2 5-15	1189	D	
051	-5480Z	NATIONAL TEA CO MW-2	295704 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 13S 10E	MONITOR	15 --	2 PLASTIC	2 5-15	1189	D	
051	-5481Z	NATIONAL TEA CO MW-3	295704 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 13S 10E	MONITOR	15 --	2 PLASTIC	2 5-15	1189	D	
051	-5482Z	NATIONAL TEA CO MW-4	295704 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 13S 10E	MONITOR	15 --	2 PLASTIC	2 5-15	1189	D	
051	-5483Z	NATIONAL TEA CO MW-5	295704 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 13S 10E	MONITOR	15 --	2 PLASTIC	2 5-15	1189	D	
051	-5484Z	HENRIC-VECOM MW-1	295709 901028	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	044 13S 10E	MONITOR	15 --	2 PLASTIC	2 10-15	0989	D	W

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5485Z	HENRIC-VECOM MW-2	295708 901028	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	044	13S	10E	MONITOR	15 --	2 PLASTIC	2 10-15	0989	D	W
051	-5486Z	HENRIC-VECOM MW-3	295709 901030	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	044	13S	10E	MONITOR	15 --	2 PLASTIC	2 10-15	0989	D	W
051	-5487Z	HENRIC-VECOM MW-4	295710 901031	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	044	13S	10E	MONITOR	15 --	2 PLASTIC	2 10-15	0989	D	W
051	-5488Z	HENRIC-VECOM MW-5	295710 901031	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	044	13S	10E	MONITOR	15 --	2 PLASTIC	2 10-15	0989	D	W
051	-5489Z	SHELL OIL MW-1	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	09E	RECOVERY	12 PA	4 PLASTIC	4 2-12	1189	D	W
051	-5490Z	SHELL OIL MW-2	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	09E	RECOVERY	8 PA	4 PLASTIC	4 3-8	1189	D	W
051	-5491Z	SHELL OIL S-1	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	09E	RECOVERY	10 --	4 PLASTIC	4 1-10	1289	D	W
051	-5492Z	SHELL OIL S-2	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	09E	RECOVERY	11 --	4 PLASTIC	4 1-11	1289	D	W
051	-5493Z	SHELL OIL S-3	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	038	12S	09E	RECOVERY	11 --	4 PLASTIC	4 1-11	1289	D	W
051	-5494Z	E-Z MART MW-1	295119 900634	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL-	066	14S	23E	MONITOR	15 --	4 PLASTIC	4 5-15	1289	D	W
051	-5495Z	E-Z MART MW-2	295119 900634	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL-	066	14S	23E	MONITOR	15 --	4 PLASTIC	4 5-15	1289	D	W
051	-5496Z	E-Z MART MW-3	295119 900634	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL-	066	14S	23E	MONITOR	15 --	4 PLASTIC	4 5-15	1289	D	W
051	-5497Z	TIME SAVER MW-1	295908 901311	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038	12S	10E	MONITOR	15 --	4 PLASTIC	4 1-15	0190	D	W
051	-5498Z	TIME SAVER MW-2	295908 901311	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038	12S	10E	MONITOR	15 --	4 PLASTIC	4 1-15	0190	D	W
051	-5499Z	TIME SAVER MW-3	295908 901311	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038	12S	10E	MONITOR	15 --	4 PLASTIC	4 1-15	0190	D	W
051	-5500Z	TIME SAVER MW-4	295908 901311	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038	12S	10E	MONITOR	15 --	4 PLASTIC	4 1-15	0190	D	W
051	-5501Z	TIME SAVER MW-5	295908 901311	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	038	12S	10E	MONITOR	15 --	4 PLASTIC	4 1-15	0190	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5502Z	EXXON CO USA MW-1	295356 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	031 13S 24E	MONITOR	14 PA	2 PLASTIC	2 2-14	1089	D	W
051	-5503Z	EXXON CO USA MW-2	295356 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	031 13S 24E	MONITOR	14 PA	2 PLASTIC	2 2-14	1089	D	W
051	-5504Z	EXXON CO USA MW-3	295356 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	031 13S 24E	MONITOR	14 PA	2 PLASTIC	2 2-14	1089	D	W
051	-5505Z	EXXON CO USA MW-1	295445 900303	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041 13S 24E	MONITOR	14 PA	4 PLASTIC	4 2-14	1189	D	W
051	-5506Z	EXXON CO USA MW-2	295445 900303	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041 13S 24E	MONITOR	14 PA	4 PLASTIC	4 2-14	1189	D	W
051	-5507Z	EXXON CO USA MW-3	295445 900303	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041 13S 24E	MONITOR	14 PA	4 PLASTIC	4 2-14	1189	D	W
051	-5508Z	EXXON CO USA MW-4	295445 900303	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	041 13S 24E	MONITOR	14 PA	4 PLASTIC	4 2-14	1189	D	W
051	-5509Z	EXXON CO USA MW-1	295523 900230	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	015 13S 24E	MONITOR	14 --	4 PLASTIC	4 2-14	1189	D	W
051	-5510Z	EXXON CO USA MW-2	295523 900230	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	015 13S 24E	MONITOR	14 --	4 PLASTIC	4 2-14	1189	D	W
051	-5511Z	EXXON CO USA MW-3	295523 900230	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	015 13S 24E	MONITOR	14 --	4 PLASTIC	4 2-14	1189	D	W
051	-5512Z	EXXON CO USA MW-4	295523 900230	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	015 13S 24E	MONITOR	14 --	4 PLASTIC	4 2-14	1189	D	W
051	-5513Z	EXXON CO USA MW-5	295523 900230	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	015 13S 24E	MONITOR	11 --	 PLASTIC	4 1-10	1189	D	W
051	-5514Z	B & G CRANE SER MW-1	295801 901023	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	15 --	4 PLASTIC	4 1-15	1189	D	W
051	-5515Z	B & G CRANE SER MW-2	295801 901023	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	1189	D	W
051	-5516Z	B & G CRANE SER MW-3	295801 901023	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	1189	D	W
051	-5517Z	B & G CRANE SER MW-1	295829 901248	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 13S 10E	MONITOR	15 --	4 PLASTIC	4 1-14	1189	D	W
051	-5518Z	B & G CRANE SER MW-2	295829 901248	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 13S 10E	MONITOR	15 --	4 PLASTIC	4 1-14	1189	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5519Z	B & G CRANE SER MW-3	295829 901248	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 13S 10E	MONITOR	15 --	4 PLASTIC	4 1-14	1189	D	W
051	-5520Z	SHELL P-8	295306 900713	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	008 14S 23E	PIEZOMETER	15 --	4 PLASTIC	4 5-15	0290	D	W
051	-5521Z	SHELL P-9	295306 900713	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	008 14S 23E	PIEZOMETER	15 --	4 PLASTIC	4 5-15	0290	D	W
051	-5522Z	SHELL OIL MW-10	295339 900712	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	008 14S 23E	MONITOR	15 --	4 PLASTIC	4 5-15	0290	D	
051	-5523Z	CHEVRON MW-1	295306 900710	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	008 14S 23E	MONITOR	14 PA	4 PLASTIC	4 3-13	0290	D	W
051	-5524Z	CHEVRON MW-2	295306 900710	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	008 14S 23E	MONITOR	14 PA	4 PLASTIC	4 3-13	0290	D	W
051	-5525Z	CHEVRON MW-3	295306 900710	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	008 14S 23E	MONITOR	14 PA	4 PLASTIC	4 3-13	0290	D	W
051	-5526Z	CHEVRON MW-4	295306 900710	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	008 14S 23E	MONITOR	14 PA	4 PLASTIC	4 3-13	0290	D	W
051	-5527Z	NEW MALTER MW-1	295522 900328	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	009 13S 24E	MONITOR	15 --	4 PLASTIC	4 5-15	0290	D	W
051	-5528Z	NEW MALTER MW-2	295518 900325	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	009 13S 24E	MONITOR	20 --	4 PLASTIC	4 10-20	0290	D	W
051	-5529Z	NEW MALTER MW-3	295518 900323	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	009 13S 24E	MONITOR	19 --	4 PLASTIC	4 9-19	0290	D	W
051	-5530Z	NEW MALTER MW-4	295517 900326	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	009 13S 24E	MONITOR	16 --	4 PLASTIC	4 6-16	0290	D	W
051	-5531Z	NEW MALTER MW-5	295518 900324	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WARE LIND	009 13S 24E	MONITOR	16 --	4 PLASTIC	4 6-16	0290	D	W
051	-5532Z	SCHWEGMANN MW-1	295414 900401	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	036 13S 24E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5533Z	SCHWEGMANN MW-2	295414 900401	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	036 13S 24E	MONITOR	14 PA	4 PLASTIC	4 1-14	0290	D	W
051	-5534Z	SCHWEGMANN MW-3	295414 900401	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	036 13S 24E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5535Z	SCHWEGMANN MW-4	295414 900401	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	036 13S 24E	MONITOR	13 --	4 PLASTIC	4 3-13	0390	D	

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5536Z	SCHWEGMANN MW-1	295828 900844	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5537Z	SCHWEGMANN MW-2	295825 900844	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5538Z	SCHWEGMANN MW-3	295825 900844	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5539Z	SCHWEGMANN TW-1	295825 900844	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 10E	MONITOR	11 --	4 PLASTIC	4 1-11	0390	D	W
051	-5540Z	SCHWEGMANN MW-1	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	
051	-5541Z	SCHWEGMANN MW-2	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5542Z	SCHWEGMANN MW-3	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5543Z	SCHWEGMANN MW-4	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0390	D	W
051	-5544Z	SCHWEGMANN MW-5	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0390	D	W
051	-5545Z	SCHWEGMANN MW-6	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0390	D	W
051	-5546Z	SCHWEGMANN MW-7	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	13 --	4 PLASTIC	4 2-12	0390	D	W
051	-5547Z	SCHWEGMANN MW-8	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	13 --	4 PLASTIC	4 2-12	0390	D	W
051	-5548Z	SCHWEGMANN MW-9	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	10 --	PLASTIC	4 1-10	0390	D	W
051	-5549Z	SCHWEGMANN TW-1	300011 900951	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	045 12S 10E	MONITOR	10 --	PLASTIC	4 1-10	0390	D	W
051	-5550Z	CHEVRON MW-4	295614 901241	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	039 13S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0190	D	W
051	-5551Z	TEXACO MW-1	295707 901253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 13S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0190	D	W
051	-5552Z	TEXACO MW-2	295707 901253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 13S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0190	D	W

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5553Z	TEXACO MW-3	295707 901253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 13S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0190	D	W
051	-5554Z	TEXACO MW-4	295707 901253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 13S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0190	D	W
051	-5555Z	TEXACO MW-5	295707 901253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 13S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0190	D	W
051	-5556Z	TEXACO MW-6	295707 901253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 13S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0190	D	W
051	-5557Z	AMOCO OIL MW-8	295516 900204	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	016 13S 24E	MONITOR	8 PA	4 PLASTIC	4 1-8	0190	D	W
051	-5558Z	EXXON CO USA MW-10	295523 900230	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	015 13S 24E	MONITOR	11 --	2 PLASTIC	2 1-11	0190	D	W
051	-5559Z	EXXON CO USA MW-11	295523 900230	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	015 13S 24E	MONITOR	11 --	2 PLASTIC	2 1-11	0190	D	W
051	-5560Z	EXXON CO USA MW-12	295523 900230	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	015 13S 24E	MONITOR	10 --	2 PLASTIC	2 1-11	0190	D	W
051	-5561Z	EXXON CO USA MW-12	295336 900651	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	006 14S 23E	MONITOR	15 --	4 PLASTIC	4 2-15	0390	D	W
051	-5562Z	EXXON CO USA MW-13	295336 900651	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	006 14S 23E	MONITOR	15 --	4 PLASTIC	4 2-14	0390	D	W
051	-5563Z	EXXON CO USA MW-14	295336 900651	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	006 14S 23E	MONITOR	15 --	4 PLASTIC	4 2-14	0390	D	W
051	-5564Z	TEXACO RW-1	295717 901253	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 13S 10E	RECOVERY	17 --	PLASTIC	12 1-15	0290	D	W
051	-5565Z	EXXON CO USA MW-1	295833 901043	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 13S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5566Z	EXXON CO USA MW-2	295833 901043	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 13S 10E	MONITOR	14 EX	4 PLASTIC	4 1-14	0290	D	W
051	-5567Z	EXXON CO USA MW-3	295833 901043	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 13S 10E	MONITOR	14 --	4 PLASTIC	4 1-14	0290	D	W
051	-5568Z	EXXON CO USA MW-4	295833 901043	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 13S 10E	MONITOR	14 EX	4 PLASTIC	4 1-14	0290	D	W
051	-5569Z	EXXON CO USA MW-1	295335 900651	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	007 14S 23E	MONITOR	14 PA					

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER
REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5570Z	TUBULAR THREAD MW-1	295422 900707	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	049 13S 23E	MONITOR	10 PA	2 PLASTIC	2 5-10	0590	D	W
051	-5571Z	TUBULAR THREAD MW-2	295422 900700	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	016 13S 23E	MONITOR	10 PA	2 PLASTIC	2 5-10	0590	D	W
051	-5572Z	TUBULAR THREAD MW-3	295427 900707	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	049 13S 23E	MONITOR	10 PA	2 PLASTIC	2 5-10	0590	D	W
051	-5573Z	TUBULAR THREAD MW-4	295427 900700	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	016 13S 23E	MONITOR	10 PA	2 PLASTIC	2 5-10	0590	D	W
051	-5574Z	CHEVRON MW-1	295843 901229	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	041 12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	0690	D	W
051	-5575Z	CHEVRON MW-2	295843 901229	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	041 12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	0690	D	W
051	-5576Z	CHEVRON MW-3	295843 901229	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	041 12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	0690	D	W
051	-5577Z	CHEVRON MW-4	295843 901229	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	041 12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	0690	D	W
051	-5578Z	CHEVRON MW-1	295448 900303	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	009 13S 24E	MONITOR	14 --	4 PLASTIC	4 4-14	0494	D	W
051	-5579Z	CHEVRON MW-2	295448 900303	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	009 13S 24E	MONITOR	14 --	4 PLASTIC	4 4-14	0494	D	W
051	-5580Z	CHEVRON MW-3	295448 900304	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	009 13S 24E	MONITOR	12 --	4 PLASTIC	4 2-12	0494	D	W
051	-5581Z	CHEVRON MW-4	295448 900304	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	009 13S 24E	MONITOR	12 --	4 PLASTIC	4 2-12	0494	D	W
051	-5582Z	CHEVRON TH-1	295448 900304	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	009 13S 24E	MONITOR	7 --	4 PLASTIC	4 2-7	0494	D	W
051	-5583Z	DELTA COMMODITE T1-5	295429 900511	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	022 13S 23E	MONITOR	20 --	4 PLASTIC	4 10-20	0694	D	W
051	-5584Z	DELTA COMMODITE T3-3	295426 900516	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	022 13S 23E	MONITOR	20 --	4 PLASTIC	4 10-20	0694	D	W
051	-5585Z	STILLEY, DENNIS MW-6	300057 901110	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	044 12S 10E	MONITOR	12 PA	2				
051	-5586Z	TOC RETAIL MW-5	300000 900730	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	124 12S 11E	MONITOR	14 --	PLASTIC	4 1-14	0490	D	W

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5587Z	CANLAN OIL COLLINS 1	294346 900750	NDRCO AQUIFER RIG WATER	022	15S	23E	RIG SUPPLY	260 PA	4 PLASTIC	4 240-260	0280	D	W
051	-5588Z	OCHSNER CLINIC MW-1	295746 900837	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	047	12S	10E	MONITOR	20 PA	2 PLASTIC	2 15-20	0590	D	W
051	-5589Z	OCHSNER CLINIC MW-2	295747 900838	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT MCCLELLAND	047	12S	10E	MONITOR	22 PA	2 PLASTIC	2 16-21	0580	D	W
051	-5590Z	OCHSNER CLINIC MW-3	295748 900836	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (SE)	047	12S	10E	MONITOR	21 PA	2 PLASTIC	2 16-21	0590	D	W
051	-5591Z	SHELL OIL MW-1	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	11 --	4 PLASTIC	4 1-11	0590	D	W
051	-5592Z	SHELL OIL MW-2	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	11 --	4 PLASTIC	4 1-11	0590	D	W
051	-5593Z	SHELL OIL MW-3	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	11 --	4 PLASTIC	4 1-11	0590	D	W
051	-5594Z	SHELL OIL MW-4	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	11 --	4 PLASTIC	4 1-11	0590	D	W
051	-5595Z	SHELL OIL MW-5	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	11 --	4 PLASTIC	4 1-11	0590	D	W
051	-5596Z	CIRCLE K MW-1	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	W
051	-5597Z	CIRCLE K MW-2	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	W
051	-5598Z	CIRCLE K MW-3	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034	14S	23E	MONITOR	17 --	4 PLASTIC	4 2-17	0888	D	W
051	-5599Z	EXXON CO USA MW-6	295411 900356	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	14S	24E	MONITOR	14 PA	4 PLASTIC	4 1-14	0390	D	W
051	-5600Z	EXXON CO USA MW-7	295411 900356	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043	14S	24E	MONITOR	14 EX	4 PLASTIC	4 1-14	0390	D	W
051	-5601Z	CHEVRON MW-1	295244 900152	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	031	14S	24E	MONITOR	10 --	4 PLASTIC	4 2-10	0590	D	W
051	-5602Z	CHEVRON MW-2	295244 900152	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	031	14S	24E	MONITOR	12 --	4 PLASTIC	4 1-12	0590	D	W
051	-5603Z	CHEVRON MW-3	295244 900152	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	031	14S	24E	MONITOR	12 --	4 PLASTIC	4 2-12	0590	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5604Z	CHEVRON MW-4	295244 900152	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	031 14S 24E	MONITOR	12 --	4 PLASTIC	4 2-12	0590	D	W
051	-5605Z	BFI N-8	295420 901534	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039 13S 22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0987	D	W
051	-5606Z	TOC RETAIL MW-6	300000 900730	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	124 12S 11E	MONITOR	12 PA	2 PLASTIC	2 5-12	0490	D	W
051	-5607Z	SOUTHLAND CORP MW-4	295833 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0390	D	W
051	-5608Z	TRANSIT AVIATIO TW-1	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	10 --	2 PLASTIC	2 2-10	1289	D	W
051	-5609Z	TRANSIT AVIATIO TW-2	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	10 --	2 PLASTIC	2 1-10	0190	D	W
051	-5610Z	TRANSIT AVIATIO MW-1	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-13	1289	D	W
051	-5611Z	TRANSIT AVIATIO MW-2	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-13	1289	D	W
051	-5612Z	TRANSIT AVIATIO MW-3	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-13	1289	D	W
051	-5613Z	TRANSIT AVIATIO MW-4	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-13	1289	D	W
051	-5614Z	TRANSIT AVIATIO MW-5	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-13	0190	D	W
051	-5615Z	TRANSIT AVIATIO MW-6	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-13	0190	D	W
051	-5616Z	TRANSIT AVIATIO MW-7	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-13	0190	D	W
051	-5617Z	TRANSIT AVIATIO MW-8	295903 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-13	0190	D	W
051	-5618Z	EXXON CO USA MW-1	295922 900923	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	17 PA	4 PLASTIC	4 2-17	0790	D	W
051	-5619Z	EXXON CO USA MW-2	295922 900923	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	17 PA	4 PLASTIC	4 2-17	0790	D	W
051	-5620Z	EXXON CO USA MW-3	295922 900923	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	046 12S 10E	MONITOR	17 PA	4 PLASTIC	4 2-17	0790	D	W

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	SECT	TOWN SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5621Z	METRY CAB SER MW-1	295831 900941	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 2-15	0890	D	W
051	-5622Z	METRY CAB SER MW-2	295831 900941	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 2-15	0890	D	W
051	-5623Z	METRY CAB SER MW-3	295831 900941	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 2-12	0890	D	W
051	-5624Z	SOUTHLAND CORP MW-4	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034	14S	23E	MONITOR	16 --	4 PLASTIC	4 1-16	0290	D	W
051	-5625Z	CIRCLE K MW-5	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034	14S	23E	MONITOR	16 --	4 PLASTIC	4 1-16	0290	D	W
051	-5626Z	CIRCLE K MW-6	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034	14S	23E	MONITOR	16 --	4 PLASTIC	4 1-16	0290	D	W
051	-5627Z	CIRCLE K MW-7	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034	14S	23E	MONITOR	16 --	4 PLASTIC	4 1-16	0290	D	W
051	-5628Z	SOUTHLAND CORP MW-8	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	034	14S	23E	MONITOR	16 --	4 PLASTIC	4 1-16	0290	D	W
051	-5629Z	SHELL CHEMICAL 16	295804 900755	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	20 --	4 PLASTIC	4 10-20	0790	D	W
051	-5630Z	SHELL CHEMICAL 33	295801 900755	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	14 --	4 PLASTIC	4 4-14	0790	D	W
051	-5631Z	SHELL CHEMICAL 63	295802 900751	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	18 --	4 PLASTIC	4 8-18	0790	D	W
051	-5632Z	SHELL CHEMICAL 64	295801 900752	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	14 --	4 PLASTIC	4 4-14	0790	D	W
051	-5633Z	SHELL CHEMICAL 65	295757 900759	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	14 --	4 PLASTIC	4 4-14	0790	D	W
051	-5634Z	SHELL CHEMICAL 66	295758 900759	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	13 --	4 PLASTIC	4 2-12	0790	D	W
051	-5635Z	SHELL CHEMICAL 67	295801 900755	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	14 --	4 PLASTIC	4 4-14	0790	D	W
051	-5636Z	SHELL CHEMICAL 68	295759 900758	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	14 --	4 PLASTIC	4 4-14	0790	D	
051	-5637Z	BARTHEL, DORIS MW-1	295942 900827	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANTHON	050	12S	10E	MONITOR	16 --	2 PLASTIC	2 1-16	0890	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5638Z	BARTHEL, DORIS MW-2	295942 900827	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANTHON	050	12S	10E	MONITOR	16 --	2 PLASTIC	2 1-16	0890	D	W
051	-5639Z	EXXON CO USA	295824 900918	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	046	12S	10E	MONITOR	15 PA					
051	-5640Z	SHELL OIL MW-6	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	049	12S	10E	MONITOR	22 --	4 PLASTIC	4 2-22	0890	D	W
051	-5641Z	SHELL OIL MW-7	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	16 --	4 PLASTIC	4 2-16	0890	D	W
051	-5642Z	SHELL OIL MW-8	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	22 --	4 PLASTIC	4 2-22	0890	D	W
051	-5643Z	SHELL OIL MW-9	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	22 --	4 PLASTIC	4 2-22	0890	D	W
051	-5644Z	SHELL OIL MW-10	300050 900943	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	045	12S	10E	MONITOR	16 --	4 PLASTIC	4 2-16	0890	D	W
051	-5645Z	BP OIL MW-1	295447 900425	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	003	13S	24E	MONITOR	15 --	2 PLASTIC	2 5-15	1090	D	W
051	-5646Z	BP OIL MW-2	295502 900437	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	003	13S	24E	MONITOR	15 --	2 PLASTIC	2 5-15	1090	D	W
051	-5647Z	BP OIL MW-3	295447 900408	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	002	13S	24E	MONITOR	15 --	2 PLASTIC	2 5-15	1090	D	
051	-5648Z	BP OIL MW-4	295445 900414	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	002	13S	24E	MONITOR	15 --	2 PLASTIC	2 5-15	1090	D	W
051	-5649Z	BP OIL MW-5	295442 900418	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	002	13S	24E	MONITOR	15 --	2 PLASTIC	2 5-15	1090	D	W
051	-5650Z	BP OIL MW-6	295451 900414	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	002	13S	24E	MONITOR	15 --	2 PLASTIC	2 5-15	1090	D	W
051	-5651Z	AMOCO OIL OW-7	295843 901342	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	039	12S	10E	MONITOR	12 PA					
051	-5652Z	CONOCO MW-12	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ACADIAN	046	12S	10E	MONITOR	18 PA	4 PLASTIC	4 3-18	0992	D	W
051	-5653Z	CONOCO RW-1	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ACADIAN	046	12S	10E	RECOVERY	17 PA	4 PLASTIC	4 2-17	0992	D	W
051	-5654Z	CONOCO RW-2	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ACADIAN	046	12S	10E	RECOVERY	18 PA	4 PLASTIC	4 3-18	0992	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5655Z	CONOCO RW-3	300012 900917	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ACADIAN	046 12S 10E	RECOVERY	18 PA	4 PLASTIC	4 3-18	0992	D	W
051	-5656Z	TOC RETAIL MW-8	300012 900912	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	046 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	1292	D	W
051	-5657Z	TOC RETAIL MW-9	300012 900912	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	046 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	1292	D	W
051	-5658Z	TOC RETAIL MW-10	300012 900912	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	046 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	1292	D	W
051	-5659Z	CHEVRON MW-1	300019 901140	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0590	D	W
051	-5660Z	CHEVRON MW-2	300019 901140	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0590	D	W
051	-5661Z	CHEVRON MW-3	300019 901140	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0590	D	W
051	-5662Z	CHEVRON MW-4	300019 901140	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0590	D	W
051	-5663Z	PHILLIPS PETRO MW-1	300016 901100	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0490	D	W
051	-5664Z	PHILLIPS PETRO MW-2	300016 901100	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0490	D	W
051	-5665Z	PHILLIPS PETRO MW-3	300016 901100	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0490	D	W
051	-5666Z	PHILLIPS PETRO MW-4	300016 901100	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0490	D	W
051	-5667Z	AMSTED IND MW-1	295233 900414	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043 14S 24E	MONITOR	10 PA	4 PLASTIC	4 1-10	0990	D	W
051	-5668Z	AMSTED IND MW-2	295233 900414	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 14S 24E	MONITOR	10 PA	4 PLASTIC	4 1-10	0990	D	W
051	-5669Z	AMSTED IND MW-3	295233 900414	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 14S 24E	MONITOR	10 PA	4 PLASTIC	4 1-10	0990	D	W
051	-5670Z	AMSTED IND MW-4	295235 900415	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 14S 24E	MONITOR	10 PA	4 PLASTIC	4 1-10	0990	D	W
051	-5671Z	AMSTED IND MW-5	295235 900415	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 14S 24E	MONITOR	10 PA	4 PLASTIC	4 1-10	0990	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP	RANGE	SECT	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5672Z	EXXON CO USA	295339	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4	4	0590	D	W
		900651	900651	PSI/PTL	13S	23E	006	MONITOR	--	PLASTIC	2-15			
051	-5673Z	EXXON CO USA	300050	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					11	4	4	0790	D	W
		MW-1	900918	PSI/PTL	12S	10E	046	MONITOR	--	PLASTIC	1-11			
051	-5674Z	EXXON CO USA	300050	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					11	4	4	0790	D	W
		MW-2	900918	PSI/PTL	12S	10E	046	MONITOR	--	PLASTIC	1-11			
051	-5675Z	EXXON CO USA	300050	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					11	4	4	0790	D	W
		MW-3	900918	PSI/PTL	12S	10E	046	MONITOR	--	PLASTIC	1-11			
051	-5676Z	TEXACO	300057	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4	4	0990	D	W
		MW-4	901057	PSI/PTL	12S	10E	044	MONITOR	--	PLASTIC	1-15			
051	-5677Z	TEXACO	300057	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4	4	0990	D	W
		MW-5	901057	PSI/PTL	12S	10E	044	MONITOR	--	PLASTIC	1-15			
051	-5678Z	TEXACO	300057	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4	4	0990	D	W
		MW-6	901057	PSI/PTL	12S	10E	044	MONITOR	--	PLASTIC	1-15			
051	-5679Z	EMRO MARKETING	300017	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					12	4	4	0890	D	W
		MW-1	901244	CUSTOM CORING	12S	10E	041	MONITOR	--	PLASTIC	2-12			
051	-5680Z	EMRO MARKETING	300017	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					12	4	4	0890	D	W
		MW-2	901244	CUSTOM CORING	12S	10E	041	MONITOR	--	PLASTIC	2-12			
051	-5681Z	EMRO MARKETING	300017	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					12	4	4	0890	D	W
		MW-3	901244	CUSTOM CORING	12S	10E	041	MONITOR	--	PLASTIC	2-12			
051	-5682Z	BURK ROYALTY	295836	NORCO AQUIFER					390	4	4	1090	D	W
		SL 12466 2	901845	RIG WATER	12S	09E	038	RIG SUPPLY	PA	PLASTIC	370-390			
051	-5683Z	STAR ENTERPRISE	295834	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	2	2	1090	D	W
		MW-15	901121	GROUNDWATER	12S	10E	093	MONITOR	--	PLASTIC	1-15			
051	-5684Z	STAR ENTERPRISE	295839	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	2	2	1090	D	W
		MW-16	901121	GROUNDWATER	12S	10E	093	MONITOR	--	PLASTIC	1-15			
051	-5685Z	BFI	295443	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					30	2	2	0987	D	W
		N-81	901537	EUSTIS	13S	22E	039	MONITOR	PA	PLASTIC	25-30			
051	-5686Z	CHEVRON	300108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					16	4	4	0790	D	W
		MW-1	901354	PSI/PTL	12S	10E	038	MONITOR	--	PLASTIC	1-16			
051	-5687Z	CHEVRON	300108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					16	4	4	0790	D	W
		MW-2	901354	PSI/PTL	12S	10E	038	MONITOR	--	PLASTIC	1-16			
051	-5688Z	CHEVRON	300108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					16	4	4	0790	D	W
		MW-3	901354	PSI/PTL	12S	10E	038	MONITOR	--	PLASTIC	1-16			

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5689Z	CHEVRON MW-4	300108 901354	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	16 --	4 PLASTIC	4 1-16	0790	D	W
051	-5690Z	EXXON CO USA MW-1	295342 900939	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	017	14S	23E	MONITOR	14 --	4 PLASTIC	4 1-14	0890	D	W
051	-5691Z	EXXON CO USA MW-2	295342 900939	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	017	14S	23E	MONITOR	14 --	4 PLASTIC	4 1-14	0890	D	W
051	-5692Z	EXXON CO USA MW-3	295342 900939	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	017	14S	23E	MONITOR	14 --	4 PLASTIC	4 1-14	0890	D	W
051	-5693Z	SIGMA COATINGS MW-1	295422 900535	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	022	13S	23E	MONITOR	14 --	2 PLASTIC	2 1-14	1190	D	W
051	-5694Z	SIGMA COATINGS MW-2	295422 900535	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	022	13S	23E	MONITOR	14 --	2 PLASTIC	2 1-14	1190	D	W
051	-5695Z	SIGMA COATINGS MW-3	295422 900535	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	022	13S	23E	MONITOR	14 --	2 PLASTIC	2 1-14	1190	D	W
051	-5696Z	BUDGET RENT CAR MW-1	295905 901539	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	09E	MONITOR	16 --	2 PLASTIC	2 1-15	0790	D	W
051	-5697Z	BUDGET RENT CAR MW-2	295905 901539	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	09E	MONITOR	16 --	2 PLASTIC	2 1-15	0790	D	W
051	-5698Z	BUDGET RENT CAR MW-3	295905 901539	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	09E	MONITOR	16 --	2 PLASTIC	2 1-15	0790	D	W
051	-5699Z	BUDGET RENT CAR MW-4	295905 901539	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	09E	MONITOR	16 --	2 PLASTIC	2 1-15	0790	D	W
051	-5700Z	BUDGET RENT CAR MW-5	295905 901539	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	037	12S	09E	MONITOR	16 --	2 PLASTIC	2 1-15	0790	D	W
051	-5701Z	SHELL OIL MW-1	300009 900850	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	045	12S	10E	MONITOR	14 EX	4 PLASTIC	4 4-14	1190	D	W
051	-5702Z	SHELL OIL MW-2	300009 900850	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	045	12S	10E	MONITOR	14 EX	4 PLASTIC	4 4-14	1190	D	W
051	-5703Z	SHELL OIL MW-3	300009 900850	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	045	12S	10E	MONITOR	14 --	4 PLASTIC	4 4-14	1190	D	W
051	-5704Z	SHELL OIL MW-4	300009 900850	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	045	12S	10E	MONITOR	14 EX	4 PLASTIC	4 4-14	1190	D	W
051	-5705Z	RHEEM MNFG W90A	295717 901041	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	13S	10E	MONITOR	20 --	2 PLASTIC	2 10-20	1190	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5706Z	RHEEM MNFG W9OB	295727 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044 13S 10E	MONITOR	14 --	2 PLASTIC	2 5-15	1190	D	W
051	-5707Z	RHEEM MNFG W9OC	295726 901052	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044 13S 10E	MONITOR	20 --	2 PLASTIC	2 10-20	1190	D	W
051	-5708Z	RHEEM MNFG W9OD	295727 901048	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044 13S 10E	MONITOR	12 --	2 PLASTIC	2 7-12	1190	D	W
051	-5709Z	SCHWEGMANN MW-1	295843 901328	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 13S 10E	MONITOR	14 --	2 PLASTIC	2 2-14	1190	D	W
051	-5710Z	SCHWEGMANN MW-2	295843 901328	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 13S 10E	MONITOR	14 --	2 PLASTIC	2 2-14	1190	D	W
051	-5711Z	SCHWEGMANN MW-3	295843 901328	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 13S 10E	MONITOR	14 --	2 PLASTIC	2 2-14	1190	D	W
051	-5712Z	EXXON CO USA MW-1	300030 901560	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	085 12S 09E	MONITOR	15 PA					
051	-5713Z	EXXON CO USA MW-2	300030 901560	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	085 12S 09E	MONITOR	15 PA					
051	-5714Z	EXXON CO USA MW-3	300030 901560	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	085 12S 09E	MONITOR	15 PA					
051	-5715Z	EXXON CO USA MW-1	295233 900254	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	056 14S 24E	MONITOR	8 PA					
051	-5716Z	EXXON CO USA MW-2	295233 900254	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	056 14S 24E	MONITOR	15 PA					
051	-5717Z	EXXON CO USA MW-3	295233 900254	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	056 14S 24E	MONITOR	15 PA					
051	-5718Z	AMOCO OIL MW-1	300104 901423	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038 12S 10E	MONITOR	10 PA					
051	-5719Z	BFI N-9	295429 901540	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039 13S 22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0987	D	W
051	-5720Z	BFI N-91	295435 901543	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	039 13S 22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0987	D	W
051	-5721Z	TIME SAVER MW-5	295736 901017	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	15 --	4 PLASTIC	4 2-14	1290	D	W
051	-5722Z	TIME SAVER MW-6	295736 901017	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044 12S 10E	MONITOR	15 --	4 PLASTIC	4 2-14	1290	D	W

STDS

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5723Z	TIME SAVER MW-7	295736 901017	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	044	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-14	1290	D	W
051	-5724Z	EXXON CO USA MW-1	295230 900646	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	13 PA	4 PLASTIC	4 1-13	1290	D	W
051	-5725Z	EXXON CO USA MW-2	295230 900646	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	13 PA	4 PLASTIC	4 1-13	1290	D	W
051	-5726Z	EXXON CO USA MW-3	295230 900646	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	007	14S	23E	MONITOR	13 PA	4 PLASTIC	4 1-13	1290	D	W
051	-5727Z	HEBERT, ALBERT	111111 111111	GRAMERCY AQUIFER MCGILL				DOMESTIC	200 --	2 PLASTIC	2 180-200	0485	D	W
051	-5728Z	AMOCO OIL OW-7	295826 900850	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	025	12S	10E	MONITOR	15 PA	4 PLASTIC				
051	-5729Z	STAR ENTERPRISE MW-3	300050 900936	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANDERSON	046	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0191	D	W
051	-5730Z	STAR ENTERPRISE MW-4	300050 900936	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANDERSON	046	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0191	D	W
051	-5731Z	STAR ENTERPRISE MW-5	300050 900936	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANDERSON	046	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0191	D	W
051	-5732Z	TENNECO MW-5	300058 901157	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	044	12S	10E	MONITOR	10 --	4 PLASTIC	4 1-10	0990	D	W
051	-5733Z	TENNECO MW-6	300058 901157	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	044	12S	10E	MONITOR	10 --	4 PLASTIC	4 1-10	0990	D	W
051	-5734Z	TENNECO MW-7	300058 901157	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	044	12S	10E	MONITOR	10 --	4 PLASTIC	4 1-10	0990	D	W
051	-5735Z	TENNECO MW-3	295731 901026	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	044	12S	10E	MONITOR	10 --	4 PLASTIC	4 1-10	1090	D	W
051	-5736Z	TENNECO MW-4	295731 901026	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	044	12S	10E	MONITOR	10 --	4 PLASTIC	4 1-10	1090	D	W
051	-5737Z	TENNECO MW-5	295731 901026	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	044	12S	10E	MONITOR	10 --	4 PLASTIC	4 1-10	1090	D	W
051	-5738Z	TENNECO MW-6	300037 901600	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	085	12S	09E	MONITOR	10 --	4 PLASTIC	4 1-10	0990	D	W
051	-5739Z	TENNECO MW-7	300037 901600	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	085	12S	09E	MONITOR	10 --	4 PLASTIC	4 1-10	0990	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5740Z	TENNECO MW-5	300010 900914	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	046	12S	10E	MONITOR	15 --	4 PLASTIC	4 1-15	0690	D	W
051	-5741Z	TENNECO MW-6	300010 900914	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	046	12S	10E	MONITOR	15 --	4 PLASTIC	4 1-15	0690	D	W
051	-5742Z	TENNECO MW-7	300010 900914	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	046	12S	10E	MONITOR	15 --	4 PLASTIC	4 1-15	0690	D	W
051	-5743Z	SCHWEGMANN MW-4	295918 901348	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	11 --	2 PLASTIC	2 1-10	0191	D	W
051	-5744Z	SCHWEGMANN MW-6	295918 901348	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	13 --	2 PLASTIC	2 1-12	0191	D	W
051	-5745Z	SCHWEGMANN MW-5	295918 901348	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	13 --	2 PLASTIC	2 1-12	0191	D	W
051	-5746Z	SCHWEGMANN MW-7	295918 901348	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	13 --	2 PLASTIC	2 1-12	0191	D	W
051	-5747Z	SCHWEGMANN MW-8	295918 901348	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	038	12S	10E	MONITOR	13 --	2 PLASTIC	2 1-12	0191	D	W
051	-5748Z	MINN MUTUAL LIF MW-1	295441 900212	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	015	14S	24E	MONITOR	15 --	2 PLASTIC	2 5-15	0391	D	W
051	-5749Z	MINN MUTUAL LIF MW-2	295441 900212	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	015	13S	24E	MONITOR	15 --	2 PLASTIC	2 5-15	0391	D	W
051	-5750Z	SOUTHLAND CORP MW-1	295727 901305	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J.E.I.	040	12S	10E	MONITOR	20 PA	4 PLASTIC	4 2-20	0291	D	W
051	-5751Z	SOUTHLAND CORP MW-2	295727 901305	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J.E.I.	040	12S	10E	MONITOR	20 PA	4 PLASTIC	4 2-20	0291	D	W
051	-5752Z	SOUTHLAND CORP MW-3	295727 901305	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT J.E.I.	040	12S	10E	MONITOR	20 PA	4 PLASTIC	4 2-20	0291	D	W
051	-5753Z	EXXON CO USA MW-1	295409 900912	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	008	13S	23E	MONITOR	14 PA					
051	-5754Z	EXXON CO USA MW-2	295409 900912	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	008	13S	23E	MONITOR	14 PA					
051	-5755Z	EXXON CO USA MW-3	295409 900912	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	008	13S	23E	MONITOR	14 PA					
051	-5756Z	EXXON CO USA MW15	295445 900302	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	009	13S	24E	MONITOR	13 --	4 PLASTIC	4 1-14	0391	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5757Z	EXXON CO USA MW16	295445 900302	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	009 13S 24E	MONITOR	13 --	4 PLASTIC	4 1-14	0391	D	W
051	-5758Z	EXXON CO USA MW17	295445 900302	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	009 13S 24E	MONITOR	13 --	4 PLASTIC	4 1-14	0391	D	W
051	-5759Z	SHELL OIL W-1	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038 12S 09E	MONITOR	12 --	4 PLASTIC	4 2-12	0591	D	W
051	-5760Z	SHELL OIL W-2	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038 12S 09E	MONITOR	12 --	4 PLASTIC	4 2-12	0591	D	W
051	-5761Z	SHELL OIL W-3	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038 12S 09E	MONITOR	12 --	4 PLASTIC	4 2-12	0591	D	W
051	-5762Z	SHELL OIL W-4	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038 12S 09E	MONITOR	12 --	4 PLASTIC	4 2-12	0591	D	W
051	-5763Z	SHELL OIL W-5	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038 12S 09E	MONITOR	9 --	2 PLASTIC	2 2-9	0591	D	W
051	-5764Z	SHELL OIL W-6	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038 12S 09E	MONITOR	10 --	2 PLASTIC	2 2-10	0591	D	W
051	-5765Z	SHELL OIL W-7	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038 12S 09E	MONITOR	12 --	4 PLASTIC	4 2-12	0591	D	W
051	-5766Z	KUSHNER, JOHN P-1	300123 901603	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	011 12S 09E	PIEZOMETER	10 --	2 PLASTIC	2 2-10	1190	D	W
051	-5767Z	AMSTED IND MW-6	295233 900414	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043 14S 24E	MONITOR	10 PA	4 PLASTIC	4 1-10	0980	D	W
051	-5768Z	CONOCO MW-1	291525 895753	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	018 21S 25E	MONITOR	14 --	4 PLASTIC	4 2-14	0890	D	W
051	-5769Z	CONOCO MW-2	291525 895753	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	018 21S 25E	MONITOR	14 --	4 PLASTIC	4 2-14	0890	D	W
051	-5770Z	CONOCO MW-3	291525 895753	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	018 21S 25E	MONITOR	14 --	4 PLASTIC	4 2-14	0890	D	W
051	-5771Z	CONOCO MW-4	291525 895753	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	018 21S 25E	MONITOR	14 --	4 PLASTIC	4 1-14	0890	D	W
051	-5772Z	CONOCO MW-5	291525 895753	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	018 21S 25E	MONITOR	13 --	4 PLASTIC	4 1-13	0890	D	W
051	-5773Z	CONOCO MW-6	291525 895753	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	018 21S 25E	MONITOR	14 --	4 PLASTIC	4 1-13	0890	D	W

IGLS

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5774Z	STAR ENTERPRISE MW-1	300050 900936	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANDERSON	046	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0191	D	W
051	-5775Z	STAR ENTERPRISE MW-2	300050 900936	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANDERSON	046	12S	10E	MONITOR	16 PA	4 PLASTIC	4 1-16	0191	D	W
051	-5776Z	TIME SAVER RW-1	300105 900724	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	123	12S	11E	RECOVERY	15 --	6 PLASTIC	6 5-15	0791	D	W
051	-5777Z	TIME SAVER RW-2	300105 900724	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	123	12S	11E	RECOVERY	15 --	6 PLASTIC	6 5-15	0791	D	W
051	-5778Z	AMOCO OIL MW-1	295912 900756	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	005	12S	10E	MONITOR	12 --	2 PLASTIC	2 2-12	0791	D	W
051	-5779Z	TOC RETAIL MW-3	300050 900920	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	046	12S	10E	MONITOR	15 --	4 PLASTIC	4 5-15	0791	D	W
051	-5780Z	TOC RETAIL MW-4	300050 900920	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	046	12S	10E	MONITOR	15 --	4 PLASTIC	4 5-15	0791	D	W
051	-5781Z	TOC RETAIL MW-5	300050 900920	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	046	12S	10E	MONITOR	15 --	4 PLASTIC	4 5-15	0791	D	W
051	-5782Z	TOC RETAIL MW-6	300050 900920	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	046	12S	10E	MONITOR	15 --	4 PLASTIC	4 5-15	0791	D	W
051	-5783Z	TIME SAVER NW-3	300105 900724	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	123	12S	11E	MONITOR	16 --	4 PLASTIC	4 5-15	0891	D	W
051	-5784Z	TIME SAVER NW-4	300105 900724	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	123	12S	11E	MONITOR	15 --	4 PLASTIC	4 5-15	0891	D	
051	-5785Z	TIME SAVER NW-5	300105 900724	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	123	12S	11E	MONITOR	15 --	4 PLASTIC	4 5-15	0891	D	
051	-5786Z	KRUSHNER, JOHN MW-3	300132 901608	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	011	12S	09E	MONITOR	8 --	4 PLASTIC	4 2-8	0791	D	W
051	-5787Z	KRUSHNER, JOHN MW-1	300132 901608	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	011	12S	09E	MONITOR	9 --	4 PLASTIC	4 4-9	0791	D	W
051	-5788Z	KRUSHNER, JOHN MW-2	300132 901608	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	011	12S	09E	MONITOR	12 --	4 PLASTIC	4 2-12	0791	D	W
051	-5789Z	SHELL OIL W-6-1	295337 900713	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	14S	24E	MONITOR	12 --	4 PLASTIC	4 2-12	0991	D	W
051	-5790Z	BFI N-1R	295440 901540	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	039	13S	22E	MONITOR	22 --	4 PLASTIC	4 18-23	0991	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5791Z	BFI W-1R	295446 / 901531	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	28 --	4 PLASTIC	4 22-27	0991	D	W
051	-5792Z	BFI N-2R	295438 / 901533	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	30 --	4 PLASTIC	4 25-30	0991	D	W
051	-5793Z	BFI W-2R	295446 / 901526	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	30 --	4 PLASTIC	4 25-30	0991	D	W
051	-5794Z	BFI N-3R	295438 / 901530	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	32 --	4 PLASTIC	4 27-32	0991	D	W
051	-5795Z	BFI W-3R	295440 / 901527	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	28 --	4 PLASTIC	4 22-27	0991	D	W
051	-5796Z	BFI N-4R	295438 / 901527	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	34 --	4 PLASTIC	4 30-35	0991	D	W
051	-5797Z	BFI W-4R	295440 / 901530	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	40 --	4 PLASTIC	4 35-40	0991	D	W
051	-5798Z	BFI N-5R	295438 / 901509	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	32 --	4 PLASTIC	4 27-32	0991	D	W
051	-5799Z	BFI W-5R	295440 / 901533	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	27 --	4 PLASTIC	4 22-27	0991	D	W
051	-5800Z	BFI N-6AR	295436 / 901513	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	24 --	4 PLASTIC	4 20-25	0991	D	W
051	-5801Z	BFI N-8R	295420 / 901534	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	30 --	4 PLASTIC	4 25-30	0991	D	W
051	-5802Z	BFI N-10R	295440 / 901545	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	24 --	4 PLASTIC	4 19-24	0991	D	W
051	-5803Z	BFI N-9R	295429 / 901540	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	22 --	4 PLASTIC	4 18-23	0991	D	W
051	-5804Z	BFI N-7R	295429 / 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	22 --	4 PLASTIC	4 18-23	0991	D	W
051	-5805Z	BFI N-61R	295433 / 901517	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	22 --	4 PLASTIC	4 18-23	0991	D	W
051	-5806Z	BFI N-71R	295425 / 901528	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	22 --	4 PLASTIC	4 17-22	0991	D	W
051	-5807Z	BFI N-81R	295423 / 901537	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	24 --	4 PLASTIC	4 20-25	0991	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5808Z	BFI N-9IR	295435 / 901543	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	039 13S 22E	MONITOR	24 --	4 PLASTIC	4 19-24	0981	D	W
051	-5809Z	TOC RETAIL MW-5	295728 / 901054	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	043 13S 10E	MONITOR	15 --	4 PLASTIC	4 5-15	1091	D	W
051	-5810Z	TOC RETAIL MW-6	295728 / 901054	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	043 13S 10E	MONITOR	15 --	4 PLASTIC	4 5-15	1091	D	W
051	-5811Z	TOC RETAIL MW-7	295728 / 901054	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	043 13S 10E	MONITOR	15 --	4 PLASTIC	4 5-15	1091	D	W
051	-5812Z	TIME SAVER MW-1	300022 / 901510	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	037 12S 09E	MONITOR	15 --	4 PLASTIC	4 5-15	1091	D	W
051	-5813Z	TIME SAVER MW-2	300022 / 901510	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	037 12S 09E	MONITOR	15 --	4 PLASTIC	4 5-15	1091	D	W
051	-5814Z	TIME SAVER MW-3	300022 / 901510	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / SOIL TESTING	037 12S 09E	MONITOR	15 --	4 PLASTIC	4 5-15	1091	D	W
051	-5815Z	BFI N-10	295440 / 901545	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	039 13S 22E	MONITOR	30 PA	2 PLASTIC	2 25-30	0987	D	W
051	-5816Z	BFI	295431 / 901518	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / UNKNOWN	039 13S 22E	MONITOR	31 PA	2				
051	-5817Z	SHELL OIL MW-1	295727 / 901025	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	044 12S 10E	MONITOR	13 PA	4 PLASTIC	4 2-13	1191	D	W
051	-5818Z	CIRCLE K MW-5	295333 / 900107	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / G & E	030 14S 24E	MONITOR	16 --	4 PLASTIC	4 1-16	1291	D	W
051	-5819Z	CIRCLE K MW-6	295333 / 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / G & E	030 14S 24E	MONITOR	16 --	4 PLASTIC	4 1-16	1291	D	W
051	-5820Z	CIRCLE K MW-7	295332 / 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / G & E	030 14S 24E	MONITOR	16 --	4 PLASTIC	4 1-16	1291	D	W
051	-5821Z	METROPOLITAN MW-1	295246 / 900547	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	002 14S 23E	MONITOR	10 --	2 PLASTIC	2 5-10	1291	D	W
051	-5822Z	METROPOLITAN MW-2	295256 / 900549	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	002 14S 23E	MONITOR	10 --	2 PLASTIC	2 5-10	1291	D	W
051	-5823Z	METROPOLITAN MW-3	295250 / 900549	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	002 14S 23E	MONITOR	10 --	2 PLASTIC	2 5-10	1291	D	W
051	-5824Z	METROPOLITAN MW-4	295238 / 900548	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT / EUSTIS	002 14S 23E	MONITOR	10 --	2 PLASTIC	2 5-10	1291	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5825Z	METROPOLITAN MW-5	295238 900549	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	002	14S	23E	MONITOR	10 --	2 PLASTIC	2 5-10	1291	D	W
051	-5826Z	METROPOLITAN MW-6	295250 900540	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	001	14S	23E	MONITOR	10 --	2 PLASTIC	2 5-10	1291	D	W
051	-5827Z	METROPOLITAN MW-7	295250 900540	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	001	14S	23E	MONITOR	10 --	2 PLASTIC	2 5-10	1291	D	W
051	-5828Z	STUMPF, JACK F MW-1	295346 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	030	14S	24E	MONITOR	10 --	4 PLASTIC	4 5-10	0192	D	W
051	-5829Z	STUMPF, JACK F MW-2	295346 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	030	14S	24E	MONITOR	10 --	4 PLASTIC	4 5-10	0192	D	W
051	-5830Z	STUMPF, JACK F MW-4	295346 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	030	14S	24E	MONITOR	10 --	4 PLASTIC	4 5-10	0192	D	W
051	-5831Z	STUMPF, JACK F MW-5	295346 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	030	14S	24E	MONITOR	10 --	4 PLASTIC	4 5-10	0192	D	W
051	-5832Z	STUMPF, JACK F MW-6	295346 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	030	14S	24E	MONITOR	15 --	4 PLASTIC	4 10-15	0192	D	W
051	-5833Z	SANDAIR CORP MW-1	295338 900454	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	044	14S	24E	MONITOR	15 --	4 PLASTIC	4 5-15	0192	D	
051	-5834Z	SANDAIR CORP MW-2	295338 900454	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	044	14S	24E	MONITOR	15 --	4 PLASTIC	4 5-15	0192	D	
051	-5835Z	SANDAIR CORP MW-3	295338 900454	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	044	14S	24E	MONITOR	15 --	4 PLASTIC	4 5-15	0192	D	
051	-5836Z	SHELL OIL W-8	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038	12S	09E	MONITOR	12 --	2 PLASTIC	2 2-12	0192	D	W
051	-5837Z	SHELL OIL W-9	295831 901553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENCOR	038	12S	09E	MONITOR	12 --	2 PLASTIC	2 2-12	0192	D	W
051	-5838Z	SIGMA COATINGS GM 1	295420 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL\	045	13S	23E	MONITOR	18 --	4 STEEL	4 13-18	1291	D	W
051	-5839Z	SIGMA COATINGS GM 2	295420 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL\	045	13S	23E	MONITOR	16 --	4 STEEL	4 11-16	1291	D	W
051	-5840Z	SIGMA COATINGS GM 3	295420 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL\	045	13S	23E	MONITOR	14 --	4 STEEL	4 9-14	1291	D	W
051	-5841Z	SIGMA COATINGS GM 4	295420 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL\	045	13S	23E	MONITOR	16 --	4 STEEL	4 11-16	1291	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5842Z	SIGMA COATINGS GM 5	295420 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL\	045 13S 23E	MONITOR	15 --	4 STEEL	4 10-15	1291	D	W
051	-5843Z	SIGMA COATINGS GM 6	295420 900555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL\	045 13S 23E	MONITOR	18 --	4 STEEL	4 13-18	1291	D	W
051	-5844Z	CHEVRON MW-5	295308 900710	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	008 14S 23E	MONITOR	14 PA	4 PLASTIC		0280		
051	-5845Z	CONOCO MW-101	291529 895743	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (SE)	018 21S 25E	MONITOR	12 --	4 PLASTIC	4 4-12	0991	D	W
051	-5846Z	CONOCO MW-125	291631 895745	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (SE)	018 21S 25E	MONITOR	12 --	4 PLASTIC	4 4-12	0991	D	W
051	-5847Z	CHEVRON MW-1	300115 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-14	0192	D	W
051	-5848Z	CHEVRON MW-2	300115 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-14	0192	D	W
051	-5849Z	CHEVRON MW-3	300115 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-14	0192	D	W
051	-5850Z	CHEVRON MW-4	300115 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	037 12S 09E	MONITOR	14 --	4 PLASTIC	4 1-14	0192	D	W
051	-5851Z	CHEVRON MW-1	295140 900245	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM CORING	056 14S 24E	MONITOR	12 --	4 PLASTIC	4 2-12	0192	D	W
051	-5852Z	WESTERN WASTE MW-1	295459 901521	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRO DRILL	004 13S 22E	MONITOR	89 --	4 PLASTIC	4 79-89	0292	D	W
051	-5853Z	WESTERN WASTE MW-2	295447 901520	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRO DRILL	004 13S 22E	MONITOR	87 --	4 PLASTIC	4 77-87	0192	D	W
051	-5854Z	WESTERN WASTE MW-3	295438 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRO DRILL	004 13S 22E	MONITOR	89 --	4 PLASTIC	4 79-89	0292	D	W
051	-5855Z	WESTERN WASTE MW-4	295441 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRO DRILL	004 13S 22E	MONITOR	89 --	4 PLASTIC	4 79-89	0292	D	W
051	-5856Z	CIRCLE K MW-1	295832 901054	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	044 12S 10E	MONITOR	16 PA	4 PLASTIC	4 1-16	1091	D	W
051	-5857Z	SOUTHLAND CORP MW-1	295906 901434	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	038 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	1091	D	W
051	-5858Z	A & P TEA CO MW-1	295706 901055	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	043 13S 10E	MONITOR	9 --	4 PLASTIC	4 4-9	0392	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5859Z	A & P TEA CO MW-2	295706 901055	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	043	13S	10E	MONITOR	9 --	4 PLASTIC	4 4-9	0392	D	W
051	-5860Z	A & P TEA CO MW-3	295706 901055	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	043	13S	10E	MONITOR	9 --	4 PLASTIC	4 4-9	0392	D	W
051	-5861Z	A & P TEA CO MW-4	295706 901055	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAW (TX)	043	13S	10E	MONITOR	9 --	4 PLASTIC	4 4-9	0392	D	W
051	-5862Z	AMERICAN WASTE W-01R	295511 901547	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	12S	22E	MONITOR	11 --	2 PLASTIC	2 6-11	0392	D	W
051	-5863Z	AMERICAN WASTE W-02R	295453 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	12S	22E	MONITOR	10 --	2 PLASTIC	2 5-10	0392	D	W
051	-5864Z	AMERICAN WASTE W-03R	295506 901604	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	12S	22E	MONITOR	10 --	2 PLASTIC	2 5-10	0392	D	W
051	-5865Z	AMERICAN WASTE W-04R	295505 901604	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	12S	22E	MONITOR	20 --	2 PLASTIC	2 15-20	0392	D	W
051	-5866Z	AMERICAN WASTE W-05R	295453 901548	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	12S	22E	MONITOR	18 --	2 PLASTIC	2 13-18	0392	D	W
051	-5867Z	AMERICAN WASTE W-06R	295518 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	12S	22E	MONITOR	19 --	2 PLASTIC	2 14-19	0392	D	W
051	-5868Z	STAR ENTERPRISE MW-1	295830 901129	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	044	12S	10E	MONITOR	16 PA	4 OTHER	4 1-16	0292	D	W
051	-5869Z	STAR ENTERPRISE MW-2	295830 901129	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	044	12S	10E	MONITOR	16 PA	4 OTHER	4 1-16	0292	D	W
051	-5870Z	STAR ENTERPRISE MW-3	295830 901129	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	044	12S	10E	MONITOR	16 --	4 OTHER	4 1-16	0292	D	W
051	-5871Z	STAR ENTERPRISE MW-4	295830 901129	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	044	12S	10E	MONITOR	16 --	4 OTHER	4 1-16	0292	D	W
051	-5872Z	STAR ENTERPRISE MW-5	295830 901129	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	044	12S	10E	MONITOR	16 PA	4 OTHER	4 1-16	0292	D	W
051	-5873Z	EXXON CO USA MW-1	295246 900151	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	066	14S	24E	MONITOR	14 PA	4 PLASTIC	4 2-14	1091	D	W
051	-5874Z	EXXON CO USA MW-2	295246 900151	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	031	14S	24E	MONITOR	14 PA	4 PLASTIC	4 2-14	1091	D	W
051	-5875Z	EXXON CO USA MW-3	295246 900151	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	031	14S	24E	MONITOR	14 PA	4 PLASTIC	4 2-14	1091	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5876Z	EXXON CO USA	295251	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					14	4	4	1091	D	W
			900154	PSI/PTL	031	14S	24E	MONITOR	--	PLASTIC	2-14			
051	-5877Z	EXXON CO USA MW-16	295345	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					16	4	4	0292	D	W
			900650	PSI/PTL	007	14S	23E	MONITOR	--	PLASTIC	1-16			
051	-5878Z	EXXON CO USA RW-1	295345	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					14	4	4	0292	D	W
			900650	PSI/PTL	007	14S	23E	RECOVERY	--	PLASTIC	2-14			
051	-5879Z	WITCO CORP A-2	295531	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					20	2	2	0692	D	W
			900312	GORE	001	13S	24E	MONITOR	--	PLASTIC	10-20			
051	-5880Z	WITCO CORP B-2	295531	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					30	2	2	0692	D	W
			900312	GORE	001	13S	24E	MONITOR	--	PLASTIC	20-30			
051	-5881Z	WITCO CORP C-2	295531	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					43	2	2	0692	D	W
			900312	GORE	001	13S	24E	MONITOR	--	PLASTIC	30-40			
051	-5882Z	TIME SAVER RW-1	295255	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4	4	0692	D	W
			900118	SOIL TESTING	031	14S	24E	RECOVERY	--	PLASTIC	2-15			
051	-5883Z	AMOCO OIL OW-8	295826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4				
			900850	UNKNOWN	025	12S	10E	MONITOR	PA	PLASTIC				
051	-5884Z	AMOCO OIL OW-9	295826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4				
			900850	UNKNOWN	025	12S	10E	MONITOR	PA	PLASTIC				
051	-5885Z	AMOCO OIL OW-10	295826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4				
			900850	UNKNOWN	025	12S	10E	MONITOR	PA	PLASTIC				
051	-5886Z	AMOCO OIL OW-11	295826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4				
			900850	UNKNOWN	025	12S	10E	MONITOR	PA	PLASTIC				
051	-5887Z	AMOCO OIL OW-12	295826	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15	4				
			900850	UNKNOWN	025	12S	10E	MONITOR	PA	PLASTIC				
051	-5888Z	SOUTHLAND CORP RW-1	295051	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15		12	1092	D	W
			900704	FUGRO (GS)	064	14S	23E	RECOVERY	--		1-15			
051	-5889Z	SOUTHLAND CORP RW-3	295335	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					15		12	1092	D	W
			900700	FUGRO (GS)	007	14S	23E	RECOVERY	--		1-15			
051	-5890Z	SOUTHLAND CORP MW-5	295938	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					11	2	2	1192	D	W
			901429	FUGRO (GS)	038	12S	10E	MONITOR	--	PLASTIC	1-11			
051	-5891Z	EXXON CO USA MW-1	295746	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					14	4	4	0991	D	W
			900930	PSI/PTL	046	12S	10E	MONITOR	--	PLASTIC	2-14			
051	-5892Z	EXXON CO USA MW-2	295746	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT					14	4	4	0991	D	W
			900930	PSI/PTL	046	12S	10E	MONITOR	--	PLASTIC	2-14			

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5893Z	EXXON CO USA MW-3	294748 900903	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	046 12S 10E	MONITOR	14 --	4 PLASTIC	4 2-14	0991	D	W
051	-5894Z	CHEVRON MW-1	300100 901116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ZIMMERMAN	044 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0792	D	W
051	-5895Z	CHEVRON MW-2	300100 901115	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ZIMMERMAN	044 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0792	D	W
051	-5896Z	CHEVRON MW-3	300100 901115	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ZIMMERMAN	044 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0792	D	W
051	-5897Z	CHEVRON MW-5	300100 901116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ZIMMERMAN	044 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0792	D	W
051	-5898Z	CHEVRON MW-6	300100 901115	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ZIMMERMAN	044 12S 10E	MONITOR	12 --	2 PLASTIC	2 2-12	0792	D	W
051	-5899Z	CHEVRON MW-7	300100 901115	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ZIMMERMAN	044 12S 10E	MONITOR	12 --	2 PLASTIC	2 2-12	0792	D	W
051	-5900Z	CHEVRON MW-8	300100 901116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT RUST ENVIRON-	044 12S 10E	MONITOR	12 --	2 PLASTIC	2 2-12	0792	D	W
051	-5901Z	CHEVRON MW-9	300100 901116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ZIMMERMAN	044 12S 10E	MONITOR	12 --	2 PLASTIC	2 2-12	0792	D	W
051	-5902Z	SHELL MW-17	300051 900942	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	045 12S 10E	MONITOR	16 --	4 PLASTIC	4 1-16	0692	D	W
051	-5903Z	SHELL MW-18	300051 900942	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	045 12S 10E	MONITOR	18 --	4 PLASTIC	4 3-18	0692	D	W
051	-5904Z	TIME SAVER MW-1	295948 901431	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	038 12S 10E	MONITOR	15 --	4 PLASTIC	4 5-15	0792	D	W
051	-5905Z	TIME SAVER MW-3	295948 901431	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	038 12S 10E	MONITOR	8 --	4 PLASTIC	4 3-8	0792	D	W
051	-5906Z	TIME SAVER MW-1	295427 900935	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	035 13S 23E	MONITOR	15 --	4 PLASTIC	4 5-15	0892	D	W
051	-5907Z	TIME SAVER MW-2	295427 900935	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	035 13S 23E	MONITOR	15 --	4 PLASTIC	4 5-15	0892	D	W
051	-5908Z	TIME SAVER MW-3	295427 900935	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	035 13S 23E	MONITOR	15 --	4 PLASTIC	4 5-15	0892	D	W
051	-5909Z	TIME SAVER MW-4	295427 900935	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	035 13S 23E	MONITOR	15 --	4 PLASTIC	4 5-15	0892	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	-5910Z	SHELL OIL MW-B	300051 900942	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	045 12S 10E	MONITOR	4 PA	4			
051	-5911Z	SHELL OIL MW-C	300051 900942	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	045 12S 10E	MONITOR	4 PA	4			
051	-5912Z	SHELL OIL MW-D	300051 900942	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	045 12S 10E	MONITOR	6 PA	4			
051	-5913Z	FRENCH MRKT HM MW-1	295446 900330	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL"	006 13S 24E	MONITOR	18 --	4 PLASTIC	4 8-18	0792	D W
051	-5914Z	FRENCH MRKT HM MW-2	295446 900330	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL"	006 13S 24E	MONITOR	18 --	4 PLASTIC	4 8-18	0792	D W
051	-5915Z	FRENCH MRKT HM MW-3	295446 900330	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ENVIRONMENTAL"	006 13S 24E	MONITOR	17 --	4 PLASTIC	4 7-17	0792	D W
051	-5916Z	CHEVRON MW-4	300059 901115	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ZIMMERMAN	044 12S 10E	MONITOR	17 --	4 PLASTIC	4 2-17	0792	D W
051	-5917Z	TIME SAVER MW-2	295948 901431	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	038 12S 10E	MONITOR	10 --	2 PLASTIC	2 5-10	0892	D W
051	-5918Z	SOUTHLAND CORP MW-13R	295336 900659	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	007 14S 23E	MONITOR	13 --	2 PLASTIC	2 3-13	0394	D W
051	-5919Z	EXXON CO USA MW-9	295735 901059	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043 12S 10E	MONITOR	16 --	2 PLASTIC	2 1-16	0792	D W
051	-5920Z	EXXON CO USA MW-10	295735 901059	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PSI/PTL	043 12S 10E	MONITOR	16 --	2 PLASTIC	2 1-16	0792	D W
051	-5921Z	AMERICAN WASTE W-01	295508 901545	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	038 12S 22E	MONITOR	11 PA	2		0582	
051	-5922Z	AMERICAN WASTE W-02	295453 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	038 12S 22E	MONITOR	9 PA	2		0582	
051	-5923Z	AMERICAN WASTE W-03	295505 901604	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	038 12S 22E	MONITOR	9 PA	2		0582	
051	-5924Z	AMERICAN WASTE W-04	295504 901604	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	038 12S 22E	MONITOR	20 PA	2		0582	
051	-5925Z	AMERICAN WASTE W-05	295453 901549	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	038 12S 22E	MONITOR	18 PA	2		0582	
051	-5926Z	AMERICAN WASTE W-06	295514 901603	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT WOODWARD-CLYDE	038 12S 22E	MONITOR	20 PA	2		0582	

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-5927Z	STAR ENTERPRISE MW-8	295708 901251	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	037	13S	10E	MONITOR	16 --	4 PLASTIC	4 1-16	0692	D	W
051	-5928Z	CIRCLE K MW-5	295832 901054	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	044	12S	10E	MONITOR	11 PA	2 PLASTIC	2 1-11	1192	D	W
051	-5929Z	JF TRANSIT AUTH MW-1	295518 900333	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	009	13S	24E	MONITOR	13 --	4 PLASTIC	4 3-13	1292	D	W
051	-5930Z	JF TRANSIT AUTH MW-2	295518 900333	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	009	13S	24E	MONITOR	13 --	4 PLASTIC	4 3-13	1292	D	W
051	-5931Z	JF TRANSIT AUTH MW-3	295518 900333	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	009	13S	24E	MONITOR	13 --	4 PLASTIC	4 3-13	1292	D	W
051	-5932Z	JF TRANSIT AUTH MW-4	295518 900333	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	009	13S	24E	MONITOR	13 --	4 PLASTIC	4 3-13	1292	D	W
051	-5933Z	L PONCHARTRAIN MW-5	300113 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 6-16	1292	D	W
051	-5934Z	L PONCHARTRAIN MW-6	300113 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 6-16	1292	D	W
051	-5935Z	L PONCHARTRAIN MW-7	300113 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 6-16	1292	D	W
051	-5936Z	L PONCHARTRAIN MW-8	300113 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 6-16	1292	D	W
051	-5937Z	L PONCHARTRAIN MW-9	300113 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 6-16	1292	D	W
051	-5938Z	L PONCHARTRAIN MW-10	300113 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 6-16	1292	D	W
051	-5939Z	L PONCHARTRAIN MW-11	300113 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 6-16	1292	D	W
051	-5940Z	L PONCHARTRAIN MW-12	300113 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	046	12S	10E	MONITOR	16 --	4 PLASTIC	4 6-16	1292	D	W
051	-5941Z	LOMONACO, NATHN	000000 000000	NO WELL MADE, LOG DEPTH SHOWN ECONOMY				HEAT PUMP	200 HH			0592	D	
051	-5942Z	MOBIL OIL MW-15	300022 901203	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	043	12S	10E	MONITOR	8 PA	4 OTHER	4 1-8	0393	D	W
051	-5943Z	EMRO MARKETING MW-3R	295950 901426	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	038	12S	10E	MONITOR	16 --	2 PLASTIC	2 13-15	0191	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5944Z	EMRO MARKETING MW-4R	295950 901428	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	038 12S 10E	MONITOR	21 --	2 PLASTIC	2 5-20	0191	D	W
051	-5945Z	EMRO MARKETING MW-5R	295950 901427	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	038 12S 10E	MONITOR	20 --	2 PLASTIC	2 10-20	0191	D	W
051	-5946Z	TOC RETAIL MW-10R	300001 900731	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	124 12S 11E	MONITOR	11 PA	4 PLASTIC	4 3-11	0193	D	W
051	-5947Z	CHATEAU GOLF CC MW-1	300133 901517	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 12S 09E	MONITOR	10 --	4 PLASTIC	4 2-10	0293	D	W
051	-5948Z	CHATEAU GOLF CC MW-2	300133 901517	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 12S 09E	MONITOR	10 --	4 PLASTIC	4 2-10	0293	D	W
051	-5949Z	CHATEAU GOLF CC MW-3	300133 901517	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 12S 09E	MONITOR	10 --	4 PLASTIC	4 2-10	0293	D	W
051	-5950Z	CHARBONNETT, M MW-1	300021 901434	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	038 12S 10E	PIEZOMETER	16 PA	4 PLASTIC	4 1-16	0193	D	W
051	-5951Z	CHARBONNETT, M MW-2	300021 901434	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	038 12S 10E	PIEZOMETER	18 PA	4 PLASTIC	4 3-18	0193	D	W
051	-5952Z	CHARBONNETT, M MW-3	300021 901434	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	038 12S 10E	PIEZOMETER	18 PA	4 PLASTIC	4 3-18	0193	D	W
051	-5953Z	CHEVRON MW-9	300117 901519	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SEC DONOHUE	037 12S 09E	MONITOR	6 --	2 PLASTIC	2 1-6	0193	D	W
051	-5954Z	EMRO MARKETING MW-1	295335 900732	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	015 13S 23E	MONITOR	15 --	2 PLASTIC	2 10-15	0991	D	W
051	-5955Z	EMRO MARKETING MW-2	295335 900732	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	015 13S 23E	MONITOR	14 --	2 PLASTIC	2 9-14	0991	D	W
051	-5956Z	EMRO MARKETING MW-3	295334 900732	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	015 13S 23E	MONITOR	15 --	2 PLASTIC	2 10-15	0991	D	W
051	-5957Z	TIME SAVER MW-2	295255 900118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	031 14S 24E	MONITOR	10 --	4 PLASTIC	4 2-10	0493	D	W
051	-5958Z	TIME SAVER MW-3	295255 900118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	031 14S 24E	MONITOR	10 --	4 PLASTIC	4 2-10	0493	D	W
051	-5959Z	TIME SAVER MW-4	295255 900118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	031 14S 24E	MONITOR	10 --	4 PLASTIC	4 2-10	0493	D	W
051	-5960Z	EXXON CO USA MW-1	295732 901058	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER	043 12S 10E	MONITOR	6 --	2 PLASTIC	2 1-6	0188	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5961Z	EXXON CO USA MW-2	295732 901058	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER	043	12S	10E	MONITOR	6 --	2 PLASTIC	2 1-6	0188	D	W
051	-5962Z	EXXON CO USA MW-3	295732 901058	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER	043	12S	10E	MONITOR	6 --	2 PLASTIC	2 1-6	0188	D	W
051	-5963Z	EXXON CO USA MW-1	300019 901313	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	041	12S	10E	MONITOR	14 PA	2 PLASTIC	2 1-14	0493	D	W
051	-5964Z	EXXON CO USA MW-2	300019 901313	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	041	12S	10E	MONITOR	14 PA	2 PLASTIC	2 1-14	0493	D	W
051	-5965Z	EXXON CO USA MW-3	300019 901313	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	041	12S	10E	MONITOR	14 PA	2 PLASTIC	2 1-14	0493	D	W
051	-5966Z	EXXON CO USA MW-4	300019 901313	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	041	12S	10E	MONITOR	14 --	2 PLASTIC	2 2-14	0493	D	W
051	-5967Z	NATIONS BANK MW-1	295354 900824	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	019	13S	23E	MONITOR	9 --	2 PLASTIC	2 2-9	0493	D	W
051	-5968Z	EXXON CO USA MW-1	295228 900553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	034	14S	23E	MONITOR	14 PA	2 PLASTIC	2 1-14	0493	D	W
051	-5969Z	EXXON CO USA MW-2	295228 900553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	034	14S	23E	MONITOR	14 PA	2 PLASTIC	2 1-14	0493	D	W
051	-5970Z	EXXON CO USA MW-3	295228 900553	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	034	14S	23E	MONITOR	14 PA	2 PLASTIC	2 1-14	0493	D	W
051	-5971Z	NO INT AIRPORT PZ-3A	295947 901645	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085	12S	09E	PIEZOMETER	30 --	0.50 PLASTIC	0.50 27-30	0493	D	W
051	-5972Z	TOC RETAIL MW-11	300012 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	046	12S	10E	MONITOR	18 --	4 PLASTIC	4 3-18	0593	D	W
051	-5973Z	NO INT AIRPORT PZ-7	295948 901642	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085	12S	09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
051	-5974Z	NO INT AIRPORT PZ-8	295948 901644	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085	12S	09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
051	-5975Z	NO INT AIRPORT PZ-9	295948 901645	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085	12S	09E	PIEZOMETER	15 --	0.50 PLASTIC	0.50 12-15	0493	D	W
051	-5976Z	NO INT AIRPORT PZ-10	295948 901645	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085	12S	09E	PIEZOMETER	26 --	0.50 PLASTIC	0.50 23-26	0493	D	W
051	-5977Z	TOC RETAIL MW-12	300012 900915	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	046	12S	10E	MONITOR	10 --	2 PLASTIC	2 1-10	0593	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5978Z	CIRCLE K MW-1	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	024 13S 22E	MONITOR	15 --	4 PLASTIC	4		D	W
051	-5979Z	CIRCLE K MW-8	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	024 13S 22E	MONITOR	16 --	4 PLASTIC	4 1-16	0687	D	W
051	-5980Z	CIRCLE K MW-9	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	024 13S 22E	MONITOR	16 --	4 PLASTIC	4 1-16	0687	D	W
051	-5981Z	NO INT AIRPORT PZ-15	295951 901645	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085 12S 09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
051	-5982Z	CIRCLE K RW-1	295437 901227	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN	024 13S 22E	RECOVERY	10 --		24 1-10	0787	D	W
051	-5983Z	NO INT AIRPORT PZ-17	295951 901647	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085 12S 09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
051	-5984Z	NO INT AIRPORT PZ-18	295941 901645	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085 12S 09E	PIEZOMETER	20 --	0.50 PLASTIC	0.50 17-20	0493	D	W
051	-5985Z	JEFFERSON PAR MW-1	295455 900400	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	004 13S 24E	MONITOR	13 --	4 PLASTIC	4 3-13	0693	D	W
051	-5986Z	NO INT AIRPORT PZ-20	295941 901647	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085 12S 09E	PIEZOMETER	10 --	0.50 PLASTIC	0.50 7-10	0493	D	W
051	-5987Z	NO INT AIRPORT PZ-21A	295943 901642	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085 12S 09E	PIEZOMETER	15 --	0.50 PLASTIC	0.50 12-15	0493	D	W
051	-5988Z	NO INT AIRPORT PZ-22	295943 901644	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085 12S 09E	PIEZOMETER	15 --	0.50 PLASTIC	0.50 12-15	0493	D	W
051	-5989Z	NO INT AIRPORT PZ-23	295943 901645	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085 12S 09E	PIEZOMETER	15 --	0.50 PLASTIC	0.50 12-15	0493	D	W
051	-5990Z	NO INT AIRPORT PZ-24	295943 901645	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	085 12S 09E	PIEZOMETER	20 --	0.50 PLASTIC	0.50 17-20	0493	D	W
051	-5991Z	CIRCLE K RW-1	295335 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER	030 14S 24E	RECOVERY	5 --		24 1-5	0287	D	W
051	-5992Z	CIRCLE K RW-2	295335 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	030 14S 24E	MONITOR	5 --	4 PLASTIC	4 1-5	0491	D	W
051	-5993Z	CIRCLE K RW-3	295335 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT IT CORPORATION	030 14S 24E	RECOVERY	5 --	4 PLASTIC	4 1-5	0491	D	W
051	-5994Z	CIRCLE K HB-1	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER	034 14S 23E	MONITOR	6 --	2 PLASTIC	2 1-6	0387	D	W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

BATON ROUGE

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-5995Z	CIRCLE K HB-3	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER	034	14S	23E	MONITOR	6 --	2 PLASTIC	2 1-6	0387	D	W
051	-5996Z	CIRCLE K HB-4	295249 900556	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER	034	14S	23E	MONITOR	7 --	2 PLASTIC	2 1-6	0387	D	W
051	-5997Z	AMOCO OIL MW-1	300006 900806	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	125	12S	11E	MONITOR	13 --	4 PLASTIC	4 3-13	0793	D	W
051	-5998Z	AMOCO OIL MW-2	300006 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	125	12S	11E	MONITOR	13 --	4 PLASTIC	4 3-13	0793	D	W
051	-5999Z	AMOCO OIL MW-3	300006 900805	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	125	12S	11E	MONITOR	13 --	4 PLASTIC	4 3-13	0793	D	W
051	-6000Z	D C METCO INC MW-2	295816 900910	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	046	12S	10E	MONITOR	10 --	4 PLASTIC	4 3-10	0693	D	W
051	-6001Z	D C METCO INC MW-3	295816 900910	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	046	12S	10E	MONITOR	10 --	4 PLASTIC	4 3-10	0693	D	W
051	-6002Z	D C METCO INC MW-4	295816 900910	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (ENV)	046	12S	10E	MONITOR	10 --	4 PLASTIC	4 3-10	0693	D	W
051	-6003Z	EXXON CO USA MW-1	295932 901042	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	044	12S	10E	MONITOR	14 PA	4 PLASTIC	4 1-14	0290	D	W
051	-6004Z	EXXON CO USA MW-3	295932 901042	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	044	12S	10E	MONITOR	14 PA	4 PLASTIC	4 1-14	0290	D	W
051	-6005Z	K MART MTW-1	295255 900115	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	031	14S	24E	MONITOR	15 --	4 PLASTIC	4 5-15	0893	D	W
051	-6006Z	K MART MTW-2	295254 900116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	031	14S	24E	MONITOR	15 --	4 PLASTIC	4 5-15	0893	D	W
051	-6007Z	K MART MTW-3	295256 900116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	031	14S	24E	MONITOR	15 --	4 PLASTIC	4 5-15	0893	D	W
051	-6008Z	K MART MTW-4	295254 900116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	031	14S	24E	MONITOR	15 --	4 PLASTIC	4 5-15	0893	D	W
051	-6009Z	K MART MTW-5	295253 900116	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	031	14S	24E	MONITOR	15 --	4 PLASTIC	4 5-15	0893	D	W
051	-6010Z	STAR ENTERPRISE SVP-1	295834 901121	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BEST	043	12S	10E	OTHER	16 -Z	2 PLASTIC	2 1-16	0493	D	W
051	-6011Z	STAR ENTERPRISE SVP-2	295834 901121	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BEST	043	12S	10E	OTHER	16 -Z	2 PLASTIC	2 1-16	0493	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-6012Z	STAR ENTERPRISE SVP-3	295834 901121	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT BEST	043	12S	10E	OTHER	16 -2	2 PLASTIC	2 1-16	0483	D	W
051	-6013Z	STAR ENTERPRISE MW-1	295938 901433	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	038	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-15	0793	D	W
051	-6014Z	STAR ENTERPRISE MW-2	295938 901433	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	038	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-15	0793	D	W
051	-6015Z	STAR ENTERPRISE MW-3	295938 901433	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	038	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-15	0793	D	W
051	-6016Z	STAR ENTERPRISE MW-1	300107 901332	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	041	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-15	0793	D	W
051	-6017Z	STAR ENTERPRISE MW-2	300107 901332	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	041	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-15	0793	D	W
051	-6018Z	STAR ENTERPRISE MW-3	300107 901332	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	041	12S	10E	MONITOR	15 --	4 PLASTIC	4 2-15	0793	D	W
051	-6019Z	EVANS INDUSTEIE MW-1	295315 900427	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	14S	24E	MONITOR	15 --	4 METAL	4 2-12	0993	D	W
051	-6020Z	EVANS INDUSTEIE MW-2	295318 900428	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	14S	24E	MONITOR	15 --	4 METAL	4 2-12	0993	D	W
051	-6021Z	EVANS INDUSTEIE MW-3	295321 900430	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	14S	24E	MONITOR	15 --	4 METAL	4 2-12	0993	D	W
051	-6022Z	EVANS INDUSTEIE MW-4	295317 900431	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	14S	24E	MONITOR	15 --	4 METAL	4 2-12	0993	D	W
051	-6023Z	EVANS INDUSTEIE MW-5	295326 900400	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	14S	24E	MONITOR	15 --	4 METAL	4 2-12	0993	D	W
051	-6024Z	EVANS INDUSTEIE MW-6	295316 900357	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	056	14S	24E	MONITOR	15 --	4 METAL	4 2-12	0993	D	W
051	-6025Z	EVANS INDUSTEIE MW-7	295314 900425	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	14S	24E	MONITOR	15 --	4 METAL	4 2-12	0993	D	W
051	-6026Z	EVANS INDUSTEIE MW-8	295312 900421	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	044	14S	24E	MONITOR	15 --	4 METAL	4 2-12	0993	D	W
051	-6027Z	STAR ENTERPRISE MW-3R	295830 901129	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER/	044	12S	10E	MONITOR	10 PA	4 PLASTIC	4 1-10	0893	D	W
051	-6028Z	STAR ENTERPRISE MW-4R	295830 901129	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER/	044	12S	10E	MONITOR	9 PA	4 PLASTIC	4 1-9	0893	D	W

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER / MATERIAL	SCREEN DIAMETER / INTERVAL	DRILL DATE	AVAIL INFO	
051	-6029Z	TIME SAVER W-1	295658 901355	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	006	12S	22E	MONITOR	15 --	4 METAL	4 3-15	1093	D	W
051	-6030Z	TIME SAVER W-2	295658 901355	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	006	12S	22E	MONITOR	15 --	4 METAL	4 3-15	1093	D	W
051	-6031Z	TIME SAVER W-3	295658 901355	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	006	12S	22E	MONITOR	15 --	4 METAL	4 3-15	1093	D	W
051	-6032Z	CHEVRON MW-6	300017 901221	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	042	12S	10E	MONITOR	11 --	4 PLASTIC	4 1-11	0993	D	W
051	-6033Z	CHEVRON MW-7	300017 901222	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	042	12S	10E	MONITOR	11 --	4 PLASTIC	4 1-11	0993	D	W
051	-6034Z	STAR ENTERPRISE MW-3	300022 901142	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER/	044	12S	10E	MONITOR	17 --	4 METAL	4 1-16	0993	D	W
051	-6035Z	STAR ENTERPRISE MW-4	300022 901142	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER/	044	12S	10E	MONITOR	18 --	4 METAL	4 2-17	0993	D	W
051	-6036Z	MURPHY OIL MW-A	295545 900321	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PETRON, INC.	011	13S	24E	MONITOR	8 --	4 PLASTIC	4 3-8	1193	D	W
051	-6037Z	CYTEC INDUSTRIE MW-4	295714 901626	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT D APPOLONIA	003	13S	22E	MONITOR	62 --	3 PLASTIC	3 52-62	0981	D	W
051	-6038Z	CYTEC INDUSTRIE MW-6A	295720 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM DRILLING	003	13S	22E	MONITOR	46 --	2 PLASTIC	2 36-46	0692	D	W
051	-6039Z	CYTEC INDUSTRIE MW-6B	295720 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT CUSTOM DRILLING	003	13S	22E	MONITOR	20 --	2 PLASTIC	2 10-20	1192	D	W
051	-6040Z	CYTEC INDUSTRIE MW-7	295713 901608	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT D APPOLONIA	003	13S	22E	MONITOR	46 --	3 PLASTIC	3 36-46	0981	D	W
051	-6041Z	CYTEC INDUSTRIE MW-14	295735 901630	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT DAVIS, KEN E	003	13S	22E	MONITOR	30 --	3 PLASTIC	3 10-30	0783	D	W
051	-6042Z	CYTEC INDUSTRIE MW-20	295740 901635	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003	13S	22E	MONITOR	20 --	3 PLASTIC	3 15-20	0985	D	W
051	-6043Z	CYTEC INDUSTRIE MW-21	295735 901630	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003	13S	22E	MONITOR	19 --	3 PLASTIC	3 14-19	0985	D	W
051	-6044Z	CYTEC INDUSTRIE MW-22	295735 901630	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003	13S	22E	MONITOR	17 --	3 PLASTIC	3 12-17	0985	D	W
051	-6045Z	CYTEC INDUSTRIE MW-23	295720 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003	13S	22E	MONITOR	18 --	3 PLASTIC	3 13-18	0985	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO
051	-6046Z	CYTEC INDUSTRIE MW-24	295720 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003 13S 22E	MONITOR	22 --	3 PLASTIC	3 17-22	0985	D W
051	-6047Z	CYTEC INDUSTRIE MW-25	295720 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003 13S 22E	MONITOR	28 --	3 PLASTIC	3 23-28	0985	D W
051	-6048Z	CYTEC INDUSTRIE MW-26	295720 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003 13S 22E	MONITOR	13 --	3 PLASTIC	3 8-13	0985	D W
051	-6049Z	CYTEC INDUSTRIE MW-27	295720 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003 13S 22E	MONITOR	23 --	3 PLASTIC	3 18-23	0985	D W
051	-6050Z	CYTEC INDUSTRIE MW-28	295715 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003 13S 22E	MONITOR	28 --	3 PLASTIC	3 23-28	0985	D W
051	-6051Z	CYTEC INDUSTRIE MW-29	295715 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003 13S 22E	MONITOR	22 --	3 PLASTIC	3 17-22	0985	D W
051	-6052Z	CYTEC INDUSTRIE MW-30	295715 901620	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003 13S 22E	MONITOR	23 --	3 PLASTIC	3 18-23	0985	D W
051	-6053Z	CYTEC INDUSTRIE MW-31	295735 901630	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT LAYNE (LA)	003 13S 22E	MONITOR	24 --	3 PLASTIC	3 19-24	0985	D W
051	-6054Z	STAR ENTERPRISE MW-1	295915 900750	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	124 12S 11E	MONITOR	15 PA	4 PLASTIC	4 1-15	0289	D W
051	-6055Z	STAR ENTERPRISE MW-2	295915 900750	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	124 12S 11E	MONITOR	15 PA	4 PLASTIC	4 1-15	0289	D W
051	-6056Z	STAR ENTERPRISE MW-3	295915 900750	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	124 12S 11E	MONITOR	15 PA	4 PLASTIC	4 1-15	0289	D W
051	-6057Z	STAR ENTERPRISE MW-4	295915 900750	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PROFESSIONAL	124 12S 11E	MONITOR	15 PA	4 PLASTIC	4 1-15	0289	D W
051	-6058Z	BOH, ROBERT JW-1	295731 900809	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038 12S 11E	MONITOR	8 --	4 PLASTIC	4 3-8	1293	D W
051	-6059Z	BOH, ROBERT JW-2	295728 900809	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038 12S 11E	MONITOR	8 --	4 PLASTIC	4 3-8	1293	D W
051	-6060Z	BOH, ROBERT JW-3	295734 900812	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038 12S 11E	MONITOR	9 --	4 PLASTIC	4 4-9	1293	D W
051	-6061Z	BOH, ROBERT JW-4	295730 900812	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038 12S 11E	MONITOR	9 PA	4 PLASTIC	4 2-9	1293	D W
051	-6062Z	BOH, ROBERT JW-5	295728 900811	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038 12S 11E	MONITOR	9 --	4 PLASTIC	4 2-9	1293	D W

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-6063Z	BOH, ROBERT JW-6	295726 900810	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	9 --	4 PLASTIC	4 4-9	1293	D	W
051	-6064Z	BOH, ROBERT JW-7	295730 900809	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	9 --	4 PLASTIC	4 4-9	1293	D	W
051	-6065Z	BOH, ROBERT JW-8	295731 900810	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	038	12S	11E	MONITOR	9 --	4 PLASTIC	4 4-9	1293	D	W
051	-6066Z	ELMWOOD DIST CN 1	295634 901053	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANTHON	042	13S	10E	MONITOR	15 --	2 PLASTIC	2 5-15	1293	D	W
051	-6067Z	ELMWOOD DIST CN 2	295634 901052	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANTHON	042	13S	10E	MONITOR	15 --	2 PLASTIC	2 5-15	1293	D	W
051	-6068Z	ELMWOOD DIST CN 3	295633 901052	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANTHON	042	13S	10E	MONITOR	15 --	2 PLASTIC	2 5-15	1293	D	W
051	-6069Z	ELMWOOD DIST CN 4	295632 901053	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ANTHON	042	13S	10E	MONITOR	15 --	2 PLASTIC	2 5-15	1293	D	W
051	-6070Z	STUMPF, JACK F MW-3	295346 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	030	14S	24E	MONITOR	12 --	4 PLASTIC	4 2-12	1293	D	W
051	-6071Z	RIVER BIRCH INC P-1	295606 901522	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6072Z	RIVER BIRCH INC P-2	295606 901534	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	036	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6073Z	RIVER BIRCH INC P-3	295546 901533	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6074Z	RIVER BIRCH INC P-4	295551 901543	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6075Z	RIVER BIRCH INC P-5	295532 901547	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6076Z	RIVER BIRCH INC P-6	295536 901555	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	004	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6077Z	RIVER BIRCH INC P-7	295520 901803	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	004	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6078Z	RIVER BIRCH INC P-8	295604 901518	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6079Z	RIVER BIRCH INC P-9	295600 901508	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037	13S	22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W

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WELLRQ1A - REGISTERED WATER WELLS IN JEFFERSON -- SORTED BY WELL NUMBER

REQUESTED BY: HARTMAN ENGINEERING, INC.

PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-6080Z	RIVER BIRCH INC P-10	295552 901513	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 13S 22E	PIEZOMETER	3 PA	2 PLASTIC	2 2-3	0194	D	W
051	-6081Z	CYTEC INDUSTRIE MW-2	295750 901608	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	003 13S 22E	MONITOR	22 --	2 PLASTIC	2 12-22	0294	D	W
051	-6082Z	K MART MW-1	295749 901117	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	1293	D	W
051	-6083Z	K MART MW-2	295749 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	1293	D	W
051	-6084Z	K MART MW-3	295749 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	1293	D	W
051	-6085Z	K MART MW-4	295749 901118	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT EUSTIS	043 12S 10E	MONITOR	12 --	4 PLASTIC	4 2-12	1293	D	W
051	-6086Z	STUMPF, JACK F MW-7	295345 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	030 14S 24E	MONITOR	10 --	4 PLASTIC	4 2-10	0494	D	W
051	-6087Z	STUMPF, JACK F MW-8	295345 900108	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	030 14S 24E	MONITOR	10 --	4 PLASTIC	4 2-10	0494	D	W
051	-6088Z	DELTA AIRLINES AB-1	295925 901558	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	8 --	2 PLASTIC	2 3-8	0186	D	W
051	-6089Z	DELTA AIRLINES AB-2	295923 901558	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	8 --	2 PLASTIC	2 3-8	0186	D	W
051	-6090Z	DELTA AIRLINES AB-3	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	6 --	2 PLASTIC	2 1-6	0186	D	W
051	-6091Z	DELTA AIRLINES AB-4	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	8 --	2 PLASTIC	2 3-8	0186	D	W
051	-6092Z	DELTA AIRLINES AB-5	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	8 --	2 PLASTIC	2 3-8	0186	D	W
051	-6093Z	DELTA AIRLINES AB-6	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	8 --	2 PLASTIC	2 3-8	0186	D	W
051	-6094Z	DELTA AIRLINES MW-1	295925 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	20 --	2 PLASTIC	2 14-19	0186	D	W
051	-6095Z	DELTA AIRLINES MW-2	295923 901558	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	20 --	2 PLASTIC	2 14-19	0186	D	W
051	-6096Z	DELTA AIRLINES MW-3	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038 12S 09E	MONITOR	23 --	2 PLASTIC	2 18-22	0186	D	W

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PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT	SHIP	RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-6097Z	DELTA AIRLINES MW-4	295923 901600	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038	12S	09E	MONITOR	23 --	2 PLASTIC	2 18-22	0286	D	W
051	-6098Z	DELTA AIRLINES MW-5	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038	12S	09E	MONITOR	22 --	2 PLASTIC	2 17-21	1087	D	W
051	-6099Z	DELTA AIRLINES MW-6	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038	12S	09E	MONITOR	23 --	2 PLASTIC	2 18-23	1087	D	W
051	-6100Z	DELTA AIRLINES RS-1	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038	12S	09E	RECOVERY	25 --	6 PLASTIC	6 2-25	1987	D	W
051	-6101Z	DELTA AIRLINES RS-2	295923 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038	12S	09E	RECOVERY	22 --	5 OTHER	5 17-22	1087	D	W
051	-6102Z	DELTA AIRLINES RS-3	295924 901559	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT G & E	038	12S	09E	RECOVERY	17 --	5 OTHER	5 7-17	1187	D	W
051	-6103Z	JEFFERSON PAR MW-1	295959 900842	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ALLIANCE	050	12S	10E	MONITOR	17 --	4 PLASTIC	4 4-17	0794	D	W
051	-6104Z	JEFFERSON PAR MW-2	295959 900842	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ALLIANCE	050	12S	10E	MONITOR	16 --	4 PLASTIC	4 3-16	0794	D	W
051	-6105Z	JEFFERSON PAR MW-3	295959 900843	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ALLIANCE	050	12S	10E	MONITOR	16 --	4 PLASTIC	4 3-16	0794	D	W
051	-6106Z	JEFFERSON PAR PZ-1	295959 900842	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ALLIANCE	050	12S	10E	PIEZOMETER	16 --	1.25 PLASTIC	1.25 3-16	0794	D	W
051	-6107Z	JEFFERSON PAR PZ-2	295959 900843	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT ALLIANCE	050	12S	10E	PIEZOMETER	16 --	1.25 PLASTIC	1.25 3-16	0794	D	W
051	-6108Z	TUBULAR THREAD MW-6	295422 900704	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	007	13S	23E	MONITOR	14 PA	10 METAL	2 9-14	1291	D	
051	-6109Z	TUBULAR THREAD MW-7	295422 900704	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GORE	007	13S	23E	MONITOR	14 PA	10 METAL	2 9-14	1291	D	
051	-6110Z	MAGNOLIA SHOPIN MW-1	300017 901306	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	041	12S	10E	MONITOR	10 --	4 PLASTIC	4 2-10	0994	D	W
051	-6111Z	MAGNOLIA SHOPIN MW-2	300018 901308	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	041	12S	10E	MONITOR	10 --	4 PLASTIC	4 2-10	0994	D	W
051	-6112Z	MAGNOLIA SHOPIN MW-3	300018 901306	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	041	12S	10E	MONITOR	10 --	4 PLASTIC	4 2-10	0994	D	W
051	-6113Z	MAGNOLIA SHOPIN MW-4	300017 901307	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	041	12S	10E	MONITOR	10 --	4 PLASTIC	4 2-10	0994	D	W

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PARISH CODE	WELL NUMBER	OWNER'S NAME / OWNER'S NO.	LATITUDE / LONGITUDE	GEOLOGIC UNIT / DRILLER	TOWN SECT SHIP RANGE	WELL USE	DEPTH SUB USE	CASING DIAMETER MATERIAL	SCREEN DIAMETER INTERVAL	DRILL DATE	AVAIL INFO	
051	-6114Z	MAGNOLIA SHOPPIN MW-5	300017 901308	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	041 12S 10E	MONITOR	10 --	4 PLASTIC	4 2-10	0994	D	W
051	-6115Z	RIVER BIRCH B-4; P-1	295541 901548	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 13S 22E	PIEZOMETER	71 --	2 PLASTIC	2 63-68	0894	D	W
051	-6116Z	RIVER BIRCH B-4; P-2	295542 901552	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 13S 22E	PIEZOMETER	42 --	2 PLASTIC	2 34-39	0894	D	W
051	-6117Z	RIVER BIRCH B-4; P-3	295541 901551	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 13S 22E	PIEZOMETER	20 --	2 PLASTIC	2 12-17	0894	D	W
051	-6118Z	RIVER BIRCH B-24; P-1	295608 901624	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	036 13S 22E	PIEZOMETER	32 --	2 PLASTIC	2 25-29	0894	D	W
051	-6119Z	RIVER BIRCH B-24; P-2	295611 901523	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	036 13S 22E	PIEZOMETER	18 --	2 PLASTIC	2 10-15	0894	D	W
051	-6120Z	RIVER BIRCH B-31; P-1	295538 901636	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 13S 22E	PIEZOMETER	38 --	2 PLASTIC	2 30-35	0894	D	W
051	-6121Z	RIVER BIRCH B-31; P-2	295539 901530	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING	037 13S 22E	PIEZOMETER	18 --	2 PLASTIC	2 10-15	0894	D	W
051	-6122Z	TRANSIT AVIATIO TW-1-R1	295904 901551	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PETRON, INC.	037 12S 09E	MONITOR	16 --	4 PLASTIC	4 5-16	0994	D	W
051	-6123Z	TRANSIT AVIATIO TW-4-R1	295904 901551	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PETRON, INC.	037 12S 09E	MONITOR	15 --	4 PLASTIC	4 5-15	0994	D	W
051	-6124Z	TRANSIT AVIATIO MW-1-R1	295904 901551	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PETRON, INC.	037 12S 09E	MONITOR	17 --	4 PLASTIC	4 7-17	0994	D	W
051	-6125Z	TRANSIT AVIATIO MW-8-R1	295904 901551	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT PETRON, INC.	037 12S 09E	MONITOR	16 --	4 PLASTIC	4 5-16	0994	D	W
051	-6126Z	CYTEC INDUSTRIE MW-D-1	295715 901605	"1200-FOOT" SAND OF NEW ORLEANS AREA GRINER	003 13S 22E	MONITOR	1135 --	7 METAL	4 1031-1135	1094	D1	W
051	-6127Z	EXXON CO USA MW-6A	295730 901131	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GROUNDWATER	043 12S 10E	MONITOR	4 PA	4 PLASTIC		1988		
051	-6128Z	CYTEC INDUSTRIE MW-40	295710 901616	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	003 13S 22E	MONITOR	22 --	2 PLASTIC	2 12-22	1294	D	W
051	-6129Z	CYTEC INDUSTRIE MW-41	295701 901610	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	003 13S 22E	MONITOR	14 --	2 PLASTIC	2 9-14	1294	D	W
051	-6130Z	CYTEC INDUSTRIE MW-42	295658 901610	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY	003 13S 22E	MONITOR	14 --	2 PLASTIC	2 9-14	1294	D	W

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051	-6131Z	CYTEC INDUSTRIE MW-43	295656 901611	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY 003 13S 22E	MONITOR	14 --	2 PLASTIC	2 9-14	1294	D W
051	-6132Z	CYTEC INDUSTRIE MW-43PB	295656 901611	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY 003 13S 22E	MONITOR	26 --	2 PLASTIC	2 21-26	1294	D W
051	-6133Z	CYTEC INDUSTRIE MW-44	295656 901616	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY 003 13S 22E	MONITOR	14 --	2 PLASTIC	2 9-14	1294	D W
051	-6134Z	CYTEC INDUSTRIE MW-45	295659 901616	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY 003 13S 22E	MONITOR	20 --	2 PLASTIC	2 10-20	1294	D W
051	-6135Z	CYTEC INDUSTRIE MW-46	295702 901618	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY 003 13S 22E	MONITOR	25 --	2 PLASTIC	2 15-25	1294	D W
051	-6136Z	CYTEC INDUSTRIE MW-47	295705 901619	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY 003 13S 22E	MONITOR	26 --	2 PLASTIC	2 16-26	1294	D W
051	-6137Z	CYTEC INDUSTRIE MW-48	295707 901611	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT GERAGHTY 003 13S 22E	MONITOR	20 --	2 PLASTIC	2 10-20	1294	D W
051	-6138Z	WEATHERFORD INT MW-1	295414 900444	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN 001 13S 24E	MONITOR	25 PA	4 PLASTIC	4 20-25		
051	-6139Z	WEATHERFORD INT MW-2	295419 900443	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN 001 13S 24E	MONITOR	35 PA	4 PLASTIC	4 30-35		
051	-6140Z	WEATHERFORD INT MW-3	295415 900442	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN 001 13S 24E	MONITOR	25 PA	4 PLASTIC	4 20-25		
051	-6141Z	WEATHERFORD INT MW-4	295417 900444	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN 001 13S 24E	MONITOR	25 PA	4 PLASTIC	4 20-25		
051	-6142Z	AMOCO OIL OW-1	295738 901016	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN 044 12S 10E	MONITOR	12 PA	2 PLASTIC			
051	-6143Z	AMOCO OIL OW-2	295738 901016	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN 044 12S 10E	MONITOR	12 PA	2 PLASTIC			
051	-6144Z	AMOCO OIL OW-3	295738 901016	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT UNKNOWN 044 12S 10E	MONITOR	12 PA	2 PLASTIC			
051	-6145Z	MAGNOLIA SHOPPN MW-6	300017 901308	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOIL TESTING 041 12S 10E	MONITOR	10 --	4 PLASTIC	4 2-10	0295	D W
051	-6146Z	PIAZZO SEAFOOD	000000 000000	AQUIFER CODE NOT ASSIGNED GILL (JACK)	IRRIGATION	570 --	4 PLASTIC	4 550-570	1094	D W
051	-6147Z	WASTE MANAGE W-31T	295456 901545	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS 036 13S 22E	MONITOR	10 --	2 PLASTIC	2 6-10	0295	D W

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051	-6148Z	WASTE MANAGE W-32T	295456 901545	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	13S	22E	MONITOR	20 --	2X2 PLASTIC	2 10-14	0295	D	W
051	-6149Z	WASTE MANAGE W-33T	295454 901541	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	13S	22E	MONITOR	20 --	2 PLASTIC	2 16-20	0295	D	W
051	-6150Z	WASTE MANAGE W-34T	295454 901541	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	13S	22E	MONITOR	13 --	2 PLASTIC	2 8-13	0295	D	W
051	-6151Z	WASTE MANAGE W-35T	295452 901545	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	13S	22E	MONITOR	20 --	2 PLASTIC	2 15-20	0295	D	W
051	-6152Z	WASTE MANAGE W-36T	295452 901545	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT SOILS	038	13S	22E	MONITOR	12 --	2 PLASTIC	2 7-12	0295	D	W
051	-6153Z	CIRCLE K MW-2	295832 901054	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	044	12S	10E	MONITOR	12 PA	4 PLASTIC		1091		
051	-6154Z	CIRCLE K MW-3	295832 901054	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	044	12S	10E	MONITOR	14 PA	4 PLASTIC		1091		
051	-6155Z	CIRCLE K MW-4	295832 901054	S.E. LA. AQ. SYSTEM SURFICIAL CONFINING UNIT FUGRO (GS)	044	12S	10E	MONITOR	16 PA	4 PLASTIC		1091		

NUMBER OF WELLS SELECTED IN PARISH = 1351

STD1

APPENDIX I

WETLAND VALUE ASSESSMENT HABITAT EVALUATION ANALYSIS

HABITAT ASSESSMENT MODELS FOR FRESH SWAMP AND BOTTOMLAND HARDWOODS WITHIN THE LOUISIANA COASTAL ZONE

LOUISIANA DEPARTMENT OF NATURAL RESOURCES

BATON ROUGE, LOUISIANA

JANUARY 10, 1994

HABITAT ASSESSMENT MODELS FOR FRESH SWAMP AND BOTTOMLAND HARDWOODS WITHIN THE LOUISIANA COASTAL ZONE

I. INTRODUCTION

The habitat assessment models presented in this document are a modification of the U.S. Fish and Wildlife Service's Habitat Evaluation Procedures (HEP) and utilize, for each habitat type, one assemblage of variables considered important for determining the suitability of an area to support a diversity of fish and wildlife species. These models are intended to complement the Wetland Value Assessment Methodology (WVAM) models for fresh, intermediate, brackish, and saline marsh and shall used to quantify net gains and losses of ecological value associated with permitted activities and compensatory mitigation proposals in the Louisiana Coastal Zone. (The WVAM models were developed by the Environmental Work Group for the Coastal Wetlands Planning, Protection, and Restoration Act to evaluate projects proposed to be constructed pursuant to that Act.)

The models presented in this document were developed concurrently with the proposed Mitigation Regulations for the Louisiana Coastal Zone. The models were distributed for review, in draft form, on March 15, 1993, and July 17, 1993, with additional modifications distributed October 22, 1993. Reviewers of the models included representatives of state and federal agencies, environmental groups, oil and gas industry, chemical industry, real estate interests, agricultural interests, landowners, and local governments. While the proposed mitigation regulations will not go into affect until at least July 1, 1994, these models are considered applicable immediately.

Questions or comments regarding this document should be directed to Quin Kinler, Louisiana Department of Natural Resources, Office of Coastal Restoration and Management, P.O. Box 44487, Baton Rouge, LA 70804-4487, 504-342-1375.

II. CONCEPT / METHODOLOGY

The concept and methodology for use of these models are almost identical to the WVAM:

> "The WVA operates under the assumption that optimal conditions for general fish and wildlife habitat within a given coastal wetland type can be characterized, and that existing or predicted conditions can be compared to that optimum to provide an index of habitat quality. Habitat quality is estimated or expressed through the use of a mathematical model developed specifically for each wetland type. Each model consists of 1) a list of variables that are considered important in characterizing fish and wildlife habitat, 2) a Suitability Index graph for each variable, which defines the assumed relationship between habitat quality (Suitability Index) and different

variable values, and 3) a mathematical formula that combines Suitability Index for each variable into a single value for wetland habitat quality; that single value is referred to as the Habitat Suitability Index, or HSI."

The WVAM models and the models for fresh swamp and bottomland hardwoods attempt to assess the suitability of each habitat type for providing resting, foraging, breeding, and nursery habitat to a diverse assemblage of fish and wildlife species. While the models do not specifically assess other wetland functions and values such as storm-surge protection, floodwater storage, water quality improvement, nutrient import/export, and aesthetics, it can be generally assumed that these functions and values are positively correlated with fish and wildlife habitat quality.

III. VARIABLE SELECTION

The selection of variables was based on review of 1) Habitat Suitability Index models, published by the U.S. Fish and Wildlife Service, for wood duck, barred owl, swamp rabbit, mink, downy woodpecker, and gray squirrel, 2) a community model for forest birds, published by the U.S. Fish and Wildlife Service, 3) "A Habitat Evaluation System for Water Resources Planning", published by the U.S. Army Corps of Engineers, and 4) a draft version of "A Community Habitat Evaluation Model for Bottomland Hardwood Forests in the Southeastern United States", coauthored by the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service.

Several habitat variables appeared repeatedly in the various models reviewed. In general, it was concluded that those habitat variables which occurred most frequently in the various models were the most important for assessing habitat quality. The species-specific models concentrate on assessment of site-specific habitat quality features such as tree species composition, forest stand structure (understory, midstory, overstory conditions), stand maturity, and hydrology. The other models rely heavily on how a site fits into the overall "landscape". Both approaches are important and warrant consideration. The models presented in this document attempt to incorporate both approaches.

IV. SUITABILITY INDEX GRAPHS

The concept of suitability index graphs for the subject models is identical to that for the WVAM models:

"A Suitability Index (SI) graph is a graphical representation of how fish and wildlife habitat quality or 'suitability' of a given wetland type is predicted to change as values of the given variable change, and allows the model user to describe, through a Suitability Index, the habitat quality of a wetland area for any variable value."

In theory, each Suitability Index should range from 0.0 to 1.0, with 1.0 representing the optimal condition for the variable in question. However, because the mathematical formula that combines Suitability Indices into a single HSI involves multiplication of all Suitability Indices, a 0.0 for any Suitability Index would produce 0.0 for the HSI in the models. Therefore, in practice the lowest possible Suitability Index for these draft models is 0.01.

The suitability index graphs are presented in Appendices A (fresh swamp) and B (bottomland hardwoods).

V. SUITABILITY INDEX GRAPH ASSUMPTIONS

A. Fresh Swamp Model

Fresh swamp is defined as an area supporting or capable of supporting a canopy of woody vegetation which covers at least 33 percent of the area's surface, and with at least 60 percent of that canopy consisting of any combination of baldcypress, tupelogum, red maple, buttonbush, and/or planertree. (See Appendix C for scientific names.) If woody vegetation is present but the canopy covers less than 33 percent of the area, the fresh marsh WVAM model should be applied. If greater than 40 percent of the woody vegetation canopy consists of other tree species such as oaks, hickories, American elm, cedar elm, green ash, sweetgum, sugarberry, boxelder, common persimmon, honeylocust, red mulberry, eastern cottonwood, black willow, American sycamore, etc., the bottomland hardwood model should be applied.

Variable V1 - Stand Structure

Fresh swamp tree species do not produce hard mast; consequently, wildlife foods predominantly consist of soft mast, other edible seeds, invertebrates, and vegetation. Because most swamp tree species produce some soft mast or other edible seeds, the actual tree species composition is not usually a limiting factor. More limiting is the presence of stand structure to provide resting, foraging, breeding, nesting, and nursery habitat and the medium for invertebrate production. This medium can exist as herbaceous vegetation, shrub-scrub/midstory cover, or overstory canopy and preferably as a combination of all three. This variable assigns the lowest suitability to sites with a limited amount of all three stand structure components, the highest suitability to sites with a significant amount of all three stand structure components, and mid-range suitability to various combinations when one or two stand structure components are present.

Variable V2 - Stand Maturity

Because of man's historical conversion of fresh swamp, the loss of fresh swamp to saltwater intrusion, historical and ongoing

timber harvesting within fresh swamp, and slow tree growth rate in the subsiding Coastal Zone, fresh swamps with mature sizeable trees are a unique but ecologically important feature. These older (mature) trees provide important wildlife requisites such as tree snags and nesting cavities and the medium for invertebrate (wildlife food) production. Additionally, as the stronger trees establish themselves in the canopy, weaker trees are out-competed and eventually die, forming additional snags and downed treetops that would not be present in younger stands. The suitability graph for this variable assumes that snags, cavities, downed treetops, and invertebrate production are present in suitable amounts beginning at about age 50. Therefore, stands with a canopy of trees with an average age of 50 years or greater are considered optimal for this variable (SI = 1.0). Below age 50, it is assumed that the above-mentioned wildlife requisites become more available with increasing age. When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable.

Variable V3 - Hydrology

The primary assumption for this variable is that a natural water regime producing temporarily flooded, seasonally flooded, or semi-permanently flooded conditions is optimal. Such a water regime in fresh swamp produces ground vegetation (food, cover, detritus), crawfish, and other invertebrates; provides fish spawning and nursery habitat; and maintains water quality for fish and wildlife (SI = 1.0).

Permanently flooded fresh swamp with consistent riverine input or other water exchange provides optimal fish spawning and nursery habitat but moderate value wildlife habitat; considering both fish and wildlife components, a composite SI of 0.8 was selected for this situation.

Permanently flooded fresh swamp with little water exchange can produce poor quality water during warm weather, periodically reducing fish use and crawfish production; however, that same water can weaken certain trees producing snags, downed treetops, and invertebrates; with all factors considered, permanent flooded swamp with little water exchange is assumed to have moderate (SI = 0.4) habitat value.

Also assumed to have moderate value is a fresh swamp which is part of drainage system that allows water to remain on the site for irregular periods of time; in this situation the vegetative component of the swamp would be optimal, providing excellent habitat for many wildlife species; however, species which are heavily dependent on water would have only temporary access and fish are would generally be excluded.

In an efficient forced drainage system, the vegetative component provides some habitat value, but wildlife species which

are dependent on water and fish would essentially be excluded year round (SI = 0.1).

Variable V4 - Size of Contiguous Forested Area

Although edge and diversity, which are dominant features of small forested tracts, are important for certain wildlife species, it is important to understand four concepts: 1) species which thrive in edge habitat are highly mobile and presently occur in substantial numbers, 2) because of forest fragmentation and ongoing timber harvesting by man, edge and diversity are quite available, 3) most species found in "edge" habitat are "generalists" in habitat use and are quite capable of existing in larger tracts, and 4) those species in greatest need of conservation are "specialists" in habitat use and require large forested tracts. Therefore, the basic assumption for this variable is that larger forested tracts are less common and offer higher quality habitat than smaller tracts. For this model, tracts greater than 500 acres in size are considered large enough to warrant being considered optimal.

Variable V5 - Suitability and Traversability of Surrounding Land Uses

Many wildlife species commonly associated with fresh swamp will often use adjacent areas as temporary escape or resting cover and seasonal or diurnal food sources. Surrounding land uses which meet specific needs can render a given area of swamp more valuable to a cadre of wildlife species. Additionally, the type of surrounding land use may encourage, allow, or discourage wildlife movement between two or more desirable habitats. Land uses which allow such movement essentially increase the amount of habitat available to wildlife populations. The weighting factor assigned to various land uses reflects their estimated potential to meet specific needs and allow movement between more desirable habitats.

Variable V6 - Disturbance

Human-induced disturbance can displace individuals, modify home ranges, interfere with reproduction, cause stress, and force animals to use important energy reserves. The effect of disturbance is a factor of the distance to disturbance and the type of disturbance. A separate Suitability Graph was developed for each of those factors and the results are combined to yield a single Suitability Index for Disturbance. If the source of disturbance is located beyond 500 feet from the perimeter of the site or if the type of disturbance is "insignificant", the effects of disturbance are assumed to be negligible and SI = 1.0. If the source of disturbance is located within 50 feet of the perimeter of the site and the disturbance is "Constant or Major", the effects of disturbance are assumed to be maximum and SI = 0.01. Other combinations of distance to, and type of, disturbance yield moderate SI's of 0.26, 0.41, 0.5, and 0.65.

B. Bottomland Hardwoods Model.

Bottomland hardwoods are defined as an area supporting or capable of supporting a canopy of woody vegetation of which greater than 40 percent consists of tree species such as oaks, hickories, American elm, cedar elm, green ash, sweetgum, sugarberry, boxelder, common persimmon, honeylocust, red mulberry, eastern cottonwood, black willow, American sycamore, etc. (If 60 percent of the woody canopy consists of any combination of baldcypress, tupelogum, red maple, buttonbush, and/or planertree, the fresh swamp model should be applied).

Variable V1 - Tree Species Composition

Wildlife which utilize bottomland hardwoods depend heavily on mast, other edible seeds, and tree buds as primary sources of food. The basic assumptions for this variable are: 1) more production of mast (hard and/or soft) and other edible seeds is better than less production, and 2) because of its availability during late fall and winter and its high energy content, hard mast is more critical than soft mast, other edible seeds, and buds.

Variable V2 - Stand Maturity

Prior to about Age 10, bottomland hardwood tree species provide only a very limited amount of wildlife food, in the form of buds and leaves. Accordingly, the SI for those early years shows a very small increase from 0.0 for a site with no trees to 0.1 for a site with 10-year-old trees. The production of soft mast and other edible seeds is expected to begin at about Age 10, increase with age, and reach maximum potential by approximately Age 50 (SI = 1.0). In general, hard mast production is expected to begin at about Age 20 (SI = 0.3), increase substantially by age 30 (SI = 0.6), and reach maximum potential by approximately Age 50.

In addition to increased production of hard mast, soft mast, other edible seeds, and buds, or in stands without mast producing trees, older stands provide important wildlife requisites such as tree snags, nesting cavities, and the medium for invertebrate (wildlife food) production. Also, as the stronger trees establish themselves in the canopy, weaker trees are out-competed and eventually die, forming additional snags and downed treetops that would not be present in younger stands. Another factor to be considered is the rarity (and associated ecological importance) of mature stands, due to man's historical conversion of bottomland hardwoods and historical and ongoing timber harvesting. When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable.

Variable V3 - Understory / Midstory

The understory and midstory components of bottomland hardwoods provide resting, foraging, breeding, nesting, and nursery habitat. The understory and midstory provide soft mast, other edible seeds, and vegetation as sources of food. The understory and midstory also provide the medium for invertebrate production, an additional food source. The amount of understory coverage and the amount of midstory coverage are considered equally important and are given equal weight in determining the Suitability Index for this variable.

Variable V4 - Hydrology

Bottomland hardwood stands in the Louisiana Coastal Zone generally occur in one of four basic hydrology classes or water regimes: 1) efficient forced drainage system, 2) irregular periods of inundation due to an artificially lowered water table, 3) extended inundation or impoundment because of artificially raised water table, and 4) essentially unaltered. The optimum bottomland hardwood hydrology (SI = 1.0) is one that is essentially unaltered, allowing natural wetting and drying cycles which are beneficial to vegetation and associated fish and wildlife species. When a bottomland hardwood stand is part of an efficient forced drainage system, the vegetative component provides some habitat value, but wildlife species which are dependent on water would essentially be excluded year round, and the area would not in any way serve to promote fish production (SI = 0.1). With a moderately lowered water table, the vegetative component of the site could provide excellent habitat for many wildlife species and temporary habitat for wildlife species which are dependent on water, but fish would generally be excluded (SI = 0.5). With a raised water table, fish habitat and habitat for water-dependent wildlife could be equivalent to an unaltered system; however, other wildlife species could be adversely affected because of water-related impacts to the vegetative components of the stand (SI = 0.5).

Variable V5 - Size of Contiguous Forested Area

Although edge and diversity, which are dominant features of small forested tracts, are important for certain wildlife species, it is important to understand four concepts: 1) species which thrive in edge habitat are highly mobile and presently occur in substantial numbers, 2) because of forest fragmentation and ongoing timber harvesting by man, edge and diversity are quite available, 3) most species found in "edge" habitat are "generalists" in habitat use and are quite capable of existing in larger tracts, and 4) those species in greatest need of conservation are "specialists" in habitat use and require large forested tracts. Therefore, the basic assumption for this variable is that larger forested tracts are less common and offer higher quality habitat than smaller tracts. For this model, tracts greater than 500 acres in size are considered large enough to warrant being considered optimal.

Variable V6 - Suitability and Traversability of Surrounding Land Uses

Many wildlife species commonly associated with bottomland hardwoods will often use adjacent areas as temporary escape or resting cover and seasonal or diurnal food sources. Surrounding land uses which meet specific needs can render a given area of bottomland hardwoods more valuable to a cadre of wildlife species. Additionally, the type of surrounding land use may encourage, allow, or discourage wildlife movement between two or more desirable habitats. Land uses which allow such movement essentially increase the amount of habitat available to wildlife populations. The weighting factor assigned to various land uses reflects their estimated potential to meet specific needs and allow movement between more desirable habitats.

Variable V7 - Disturbance

Human-induced disturbance can displace individuals, modify home ranges, interfere with reproduction, cause stress, and force animals to use important energy reserves. The effect of disturbance is a factor of the distance to disturbance and the type of disturbance. A separate Suitability Graph was developed for each of those factors and the results are combined to yield a single Suitability Index for Disturbance. If the source of disturbance is located beyond 500 feet from the perimeter of the site or if the type of disturbance is "insignificant", the effects of disturbance are assumed to be negligible and SI = 1.0. If the source of disturbance is located within 50 feet of the perimeter of the site and the disturbance is "Constant or Major", the effects of disturbance are assumed to be maximum and SI = 0.01. Other combinations of distance to, and type of, disturbance yield moderate SI's of 0.26, 0.41, 0.5, and 0.65.

VI. HABITAT SUITABILITY INDEX FORMULAS

As with the WVAM, the final step in developing the subject models was "to construct a mathematical formula that combines all Suitability Indices for each wetland type into a single Habitat Suitability Index (HSI) value. Because the Suitability Indices range in value from 0.01 to 1.0, the HSI also ranges from 0.01 to 1.0, and is a numerical representation of overall or 'composite' habitat quality of the particular wetland study area being evaluated."

Any variable's Suitability Index can be weighted, by raising its exponent, to increase the importance of that variable relative to the other variables in the HSI formula. A larger exponent will increase the influence of that variable on the resultant HSI. As discussed above, the draft models attempt to incorporate site-specific habitat quality features (tree species composition, forest stand structure, stand maturity, and hydrology) and "landscape" parameters (forest size, surrounding habitat, and disturbance).

Because the primary application of these models is to quantify the loss of ecological values due to small and site-specific activities, the site specific variables (V1, V2, and V3 for fresh swamp and V1, V2, V3, and V4 for bottomland hardwoods) are considered more important and have been "given more weight" than the "landscape" variables.

For fresh swamp, the site specific variables V1 (Stand Structure) and V2 (Stand Maturity) are considered to be of greatest importance; they are weighted to the power of four. Variable V3 (Hydrology) is weighted to the power of two. The "landscape" variables (V4, V5, and V6) are not weighted.

For bottomland hardwoods, the site specific variables V1 (Tree Species Composition) and V2 (Stand Maturity) are considered to be of greatest importance; they are weighted to the power of four. Variables V3 (Understory / Midstory) and V4 (Hydrology) are weighted to the power of two. The "landscape" variables (V5, V6, and V7) are not weighted. In some cases, data for Variable V3 (Understory / Midstory) may not be readily available; in those instances that variable can be deleted from the HSI formula as indicated below.

For both fresh swamp and bottomland hardwoods, stands less than 7 years of age generally do not 1) exhibit distinguishable understory, midstory, and overstory components, 2) produce substantial mast, or 3) function as part of a forested landscape; hence,the variables Stand Structure, Tree Species Composition, Size of Contiguous Forest, and Understory / Midstory are not incorporated into the HSI formulas until the stand reaches 7 years of age.

The HSI formulas **fresh swamp** are:

1. If Age < 7 (or if cypress dbh < 5 and tupelogum et al. dbh < 4), then:

$$HSI = (SI_{V2}^4 \times SI_{V3}^2 \times SI_{V5} \times SI_{V6})^{1/8}, \text{ or}$$

2. If Age > 7 (or if cypress dbh > 5 or tupelogum et al. dbh > 4), then:

$$HSI = (SI_{V1}^4 \times SI_{V2}^4 \times SI_{V3}^2 \times SI_{V4} \times SI_{V5} \times SI_{V6})^{1/13}.$$

The HSI formulas bottomland hardwoods are:

1. If Age < 7 (or dbh < 5), then:

$$HSI = (SI_{V2}^4 \times SI_{V4}^2 \times SI_{V6} \times SI_{V7})^{1/8}, \text{ or}$$

2. If Age > 7 (or dbh > 5) and V3 (Understory / Midstory) data is available, then:

$$HSI = (SI_{V1}^4 \times SI_{V2}^4 \times SI_{V3}^2 \; SI_{V4}^2 \times SI_{V5} \times SI_{V6} \times SI_{V7})^{1/15}, \text{ or}$$

3. If Age > 7 (or dbh > 5) and V3 (Understory / Midstory) data is not available, then:

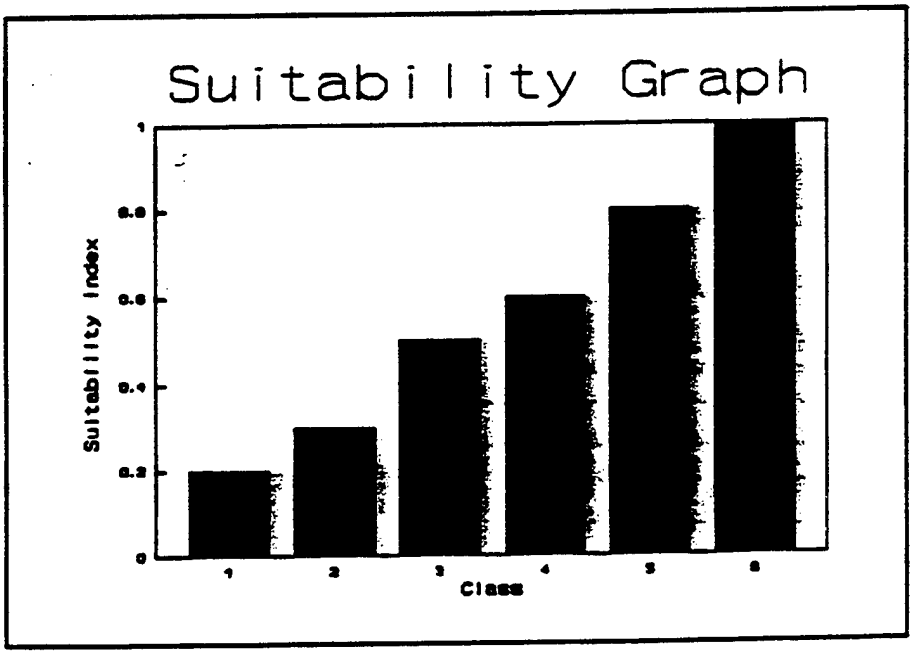
$$HSI = (SI_{V1}^4 \times SI_{V2}^4 \times SI_{V4}^2 \times SI_{V5} \times SI_{V6} \times SI_{V7})^{1/13}.$$

FRESH SWAMP

VARIABLE V1 - Stand Structure

Each component of stand structure should viewed independently to determine the percent closure or coverage.

	Overstory Closure		Herbaceous Cover		Scrub-shrub/ Midstory Cover
Class 1.	33% < 50%	and	< 33%	and	< 33%
Class 2.	> 50%	and	< 33%	and	< 33%
Class 3.	33% < 50%	and	> 33%	or	> 33%
Class 4.	> 50%	and	> 33%	or	> 33%
Class 5.	33% < 50%	and	> 33%	and	> 33%
Class 6.	> 50%	and	> 33%	and	> 33%



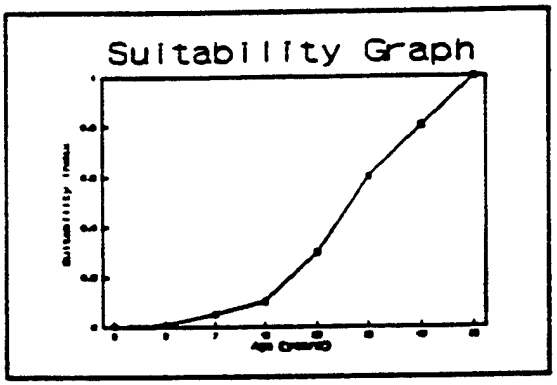
VARIABLE V2 - Stand Maturity [i.e., average age of canopy-dominant and canopy-codominant trees]

Notes:

1. When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable].

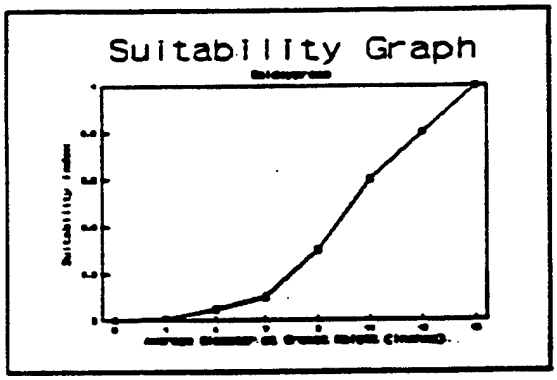
2. Canopy-dominant and canopy co-dominant trees are those trees whose crown rises above or is an integral part of the stand's overstory. When both baldcypress and tupelogum (and other species) are present in the overstory, the average age should be weighted according to the percent canopy coverage for each species group.

3. For trees with buttress swell, dbh is the diameter measured at 12" above the swell. In baldcypress and tupelogum, this can sometimes be as high as 10 - 12 feet above the ground.



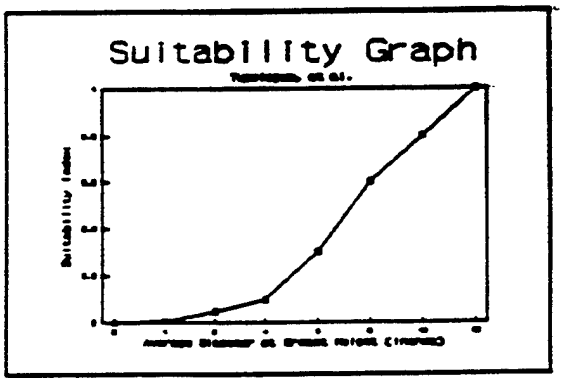
Suitability Index Line Formulas, when age is known:

If age = 0 then SI = 0.
If 0 < age ≤ 3 then SI = .0033 * age
If 3 < age ≤ 7 then SI = (.01 * age) - .02
If 7 < age ≤ 10 then SI = (.017 * age) - .07
If 10 < age ≤ 20 then SI = (.02 * age) - .1
If 20 < age ≤ 30 then SI = (.03 * age) - .3
If 30 < age ≤ 50 then SI = .02 * age
If age > 50 then SI = 1.0.



Suitability Index Line Formulas for baldcypress, when age is unknown:

If dbh = 0 then SI = 0
If 0 < dbh ≤ 1 then SI = .01 * dbh
If 1 < dbh ≤ 4 then SI = (.013 * dbh) - .002
If 4 < dbh ≤ 7 then SI = (.017 * dbh) - .019
If 7 < dbh ≤ 9 then SI = (.1 * dbh) - .6
If 9 < dbh ≤ 11 then SI = (.15 * dbh) - 1.05
If 11 < dbh ≤ 13 then SI = (.1 * dbh) - .5
If 13 < dbh ≤ 16 then SI= (.067 * dbh) - .071
If dbh > 16 then SI = 1.0.



Suitability Index Line Formulas for tupelogum et al., when age is unknown:

If dbh = 0 then SI = 0
If 0 < dbh ≤ 1 then SI = .01 * dbh
If 1 < dbh ≤ 2 then SI = (.04 * dbh) - .03
If 2 < dbh ≤ 4 then SI = .025 * dbh
If 4 < dbh ≤ 6 then SI = (.1 * dbh) - .3
If 6 < dbh ≤ 8 then SI = (.15 * dbh) - .6
If 8 < dbh ≤ 12 then SI = (.1 * dbh) - .2
If dbh > 12 then SI = 1.0.

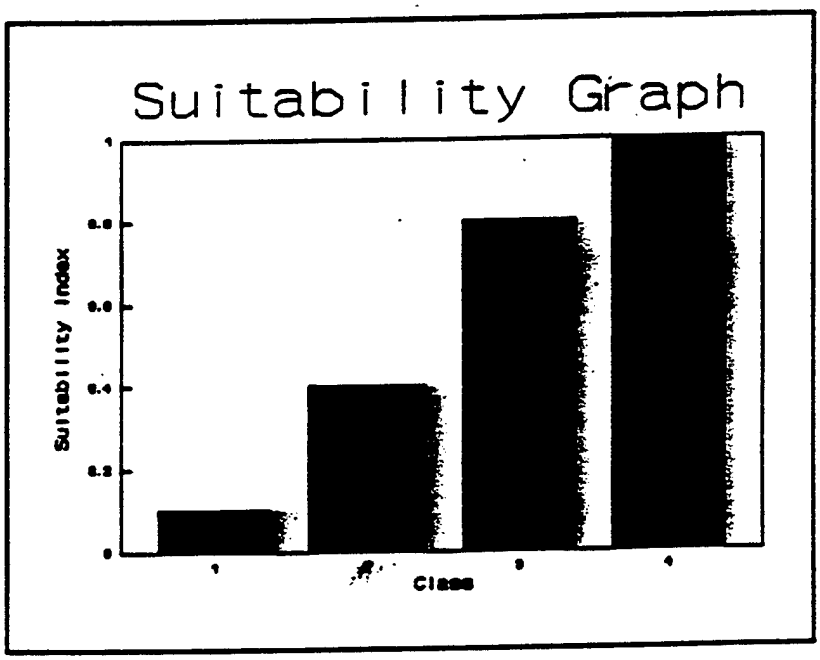
VARIABLE V3 - Hydrology

Class 1. Forced drainage system which efficiently removes water from the surface year round.

Class 2. Permanently flooded with little or no water exchange (stagnant, impounded); OR part of forced drainage or gravity drainage system which, because of subsidence or based on current operation, allows water to remain on-site for irregular but not extended periods of time.

Class 3. Permanently flooded, but receives consistent riverine input and/or other water exchange.

Class 4. Hydrology essentially unaltered and the natural water regime produces temporarily flooded, seasonally flooded, or semi-permanently flooded conditions. (The area could contain small levees and/or canals, provided that the water regime has not been significantly altered).



FRESH SWAMP

VARIABLE V4 - Size of Contiguous Forested Area

Note: Corridors less than 75 feet wide do not constitute a break in the forested area contiguity.

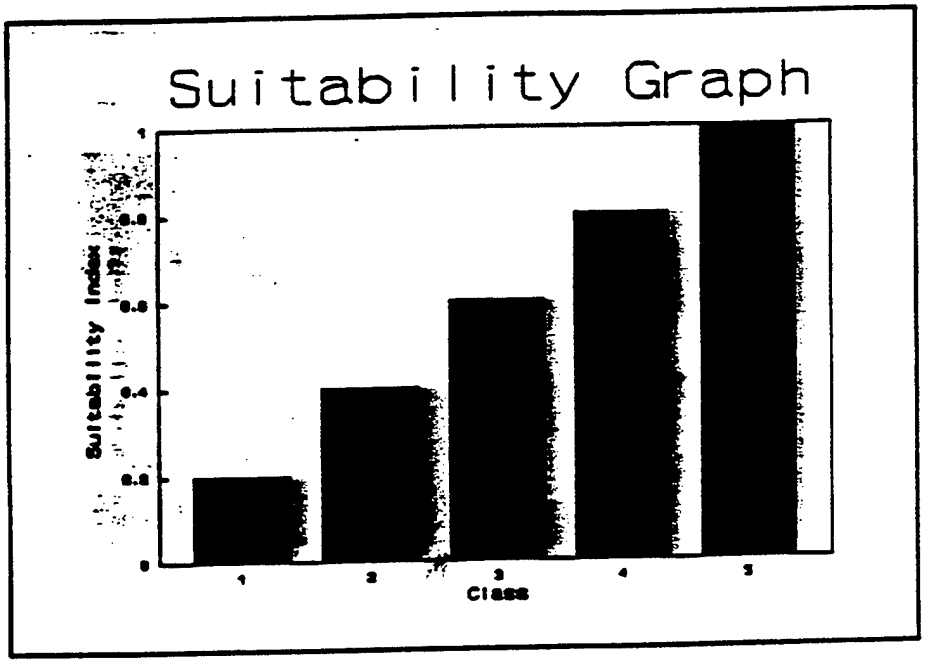
Class 1. 0 to 5 acres.

Class 2. 5.1 to 20 acres.

Class 3. 20.1 to 100 acres.

Class 4. 100.1 to 500 acres.

Class 5. > 500 acres.



FRESH SWAMP

VARIABLE V5 - Suitability and Traversability of Surrounding Land Uses

Within a 0.5 mile of the perimeter of the site, determine the percent of the surrounding area that is occupied by each of the following land uses (must account for 100 percent of the area). Multiply the percentage of each land use by the suitability weighting factor shown below, add the adjusted percentages and divide by 100 for a suitability index for this variable, except that if 100% of the surrounding Habitat is considered nonhabitat, SI equals 0.01.

LAND USE	Weighting factor		% of 0.5 mi. circle		Weighted Percent
Bottomland hardwood, other forested areas, marsh habitat, etc.	1.0	X	____	=	____
Abandoned agriculture, overgrown fields, dense cover, etc.	0.6	X	____	=	____
Pasture, hayfields, etc.	0.4	X	____	=	____
Active agriculture.	0.2	X	____	=	____
Nonhabitat: linear, residential, commercial, industrial development, etc.	0.0	X	____	=	____

____/100 = SI

VARIABLE V6 - Disturbance

The effect of disturbance is a factor of the distance to, and the type of, disturbance, hence both are incorporated in the SI formula.

Note: Linear and/or large project sites may be exposed to various types of disturbances at various distances. The SI for this variable should be weighted to account for those variances; see the example calculation of a weighted SI for Disturbance on Page A-7.

Distance Classes

Class 1. 0 to 50 ft.

Class 2. 50.1 to 500 ft.

Class 3. > 500 ft.

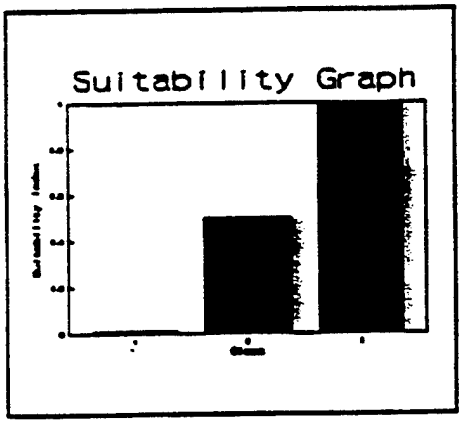
Type Classes

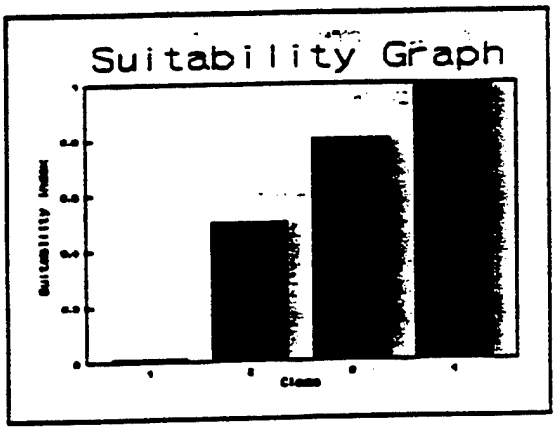
Class 1. Constant / Major (Major highways, industrial, commercial, major navigation.)

Class 2. Frequent / Moderate. (Residential development, moderately used roads, waterways commonly used by small to mid-sized boats.)

Class 3. Seasonal / Intermittent. (Agriculture, aquaculture.)

Class 4. Insignificant. (Lightly Used roads and waterways, individual homes, levees, rights of way.)



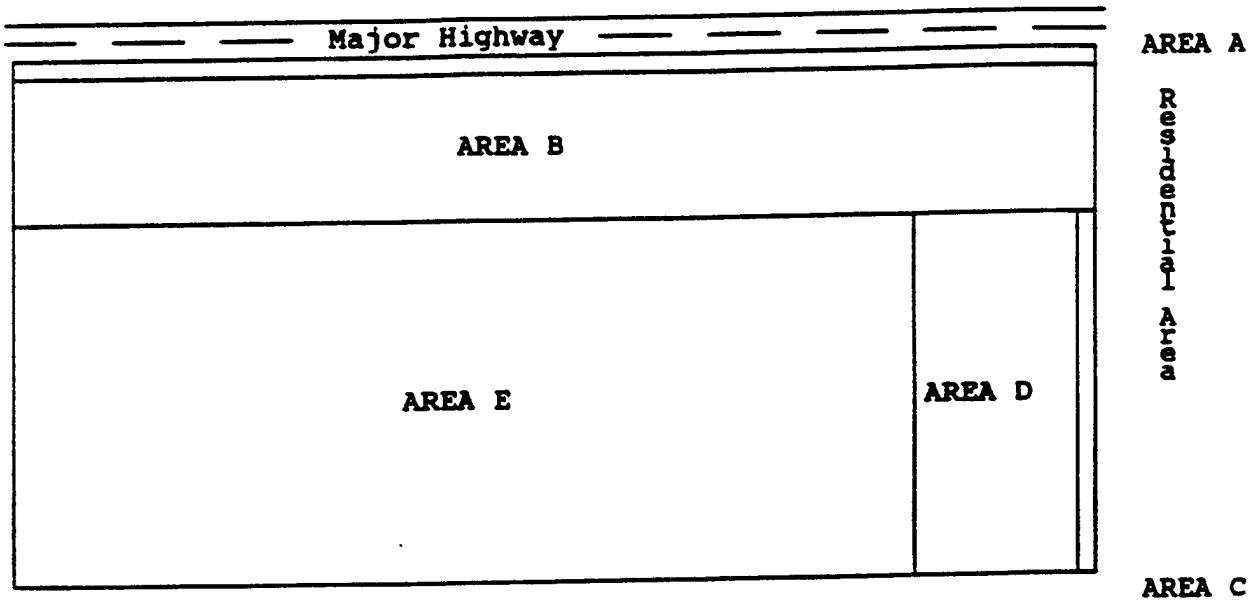


SI Formula: (Distance SI + Type SI) / 2, except that if Distance > 500 feet (Class 3) or Type is Insignificant (Class 4), HSI = 1.0.

		Type Class			
		1	2	3	4
Distance Class	1	.01	.26	.41	1
	2	.26	.50	.65	1
	3	1	1	1	1

Example Calculation of Weighted SI for Disturbance

The example project area is 1,500 feet by 3,000 feet or 103.3 acres. To calculate the weighted SI, the area is segregated to determine the percent of the project area that would be exposed to various types of disturbance at various distances. When a given portion of the project area is exposed to various type or distance classes, the type/distance combination which yields the lowest SI is utilized.



AREA	DIST-ANCE CLASS	TYPE CLASS	SI*	AREA DIMENSIONS	ACRES	% OF TOTAL AREA	WEIGHTING FACTOR (WF)
A	1	1	.01	50' x 3000'	3.4	3.3	.033
B	2	1	.26	450' x 3000'	31.0	30.0	.30
C	1	2	.26	50' x 1000'	1.1	1.2	.012
D	2	2	.50	450' x 1000'	10.3	10.0	.10
E	3	4	1.0	1000' x 2500'	57.4	55.5	.555

* See Table on Page A-6.

Weighted SI = $(SI_A \times WF_A) + (SI_B \times WF_B) + (SI_C \times WF_C) + (SI_D \times WF_D) + (SI_E \times WF_E)$

$(.01 \times .033) + (.26 \times .3) + (.26 \times .012) + (.50 \times .1) + (1.0 \times .555)$

.69

BOTTOMLAND HARDWOODS

VARIABLE V1 - Tree Species Association (see Appendix C for scientific names)

Non-mast / inedible seed producers: eastern cottonwood, black willow, American sycamore.

Hard mast producers: oaks, sweet pecan, other hickories.

Soft mast and other edible seed producers: red maple, sugarberry, green ash, boxelder, common persimmon, sweetgum, honeylocust, red mulberry, baldcypress, tupelogum, American elm, cedar elm, etc.

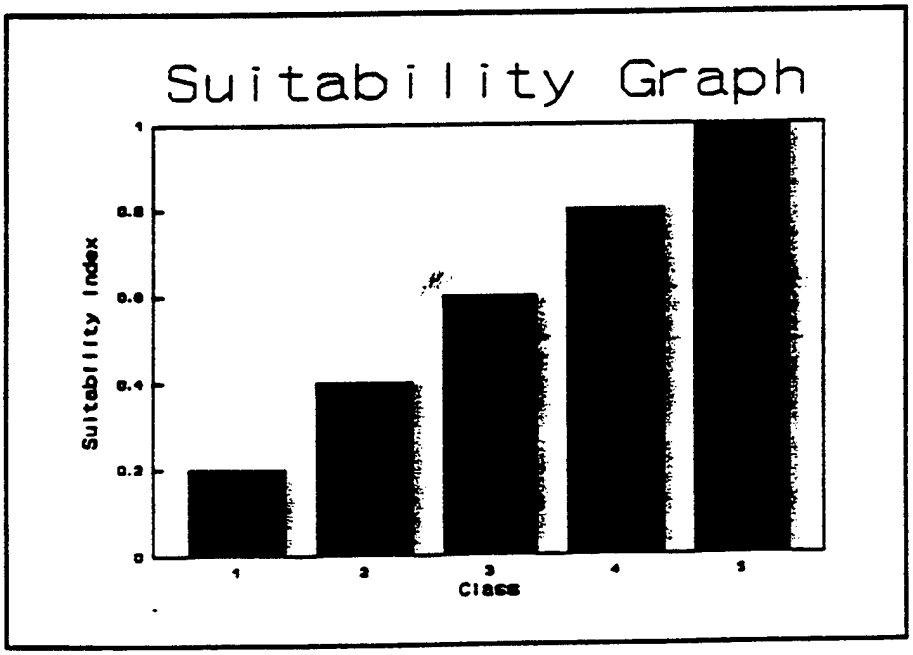
Class 1: Less than 25% of overstory canopy consists of mast or other edible-seed producing trees.

Class 2: 25% to 50% of overstory canopy consists of mast or other edible-seed producing trees, but hard mast producers constitute less than 10 % of the canopy.

Class 3: 25% to 50% of overstory canopy consists of mast or other edible-seed producing trees, and hard mast producers constitute more than 10 % of the canopy.

Class 4: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, but hard mast producers constitute less than 20 % of the canopy.

Class 5: Greater than 50% of overstory canopy consists of mast or other edible-seed producing trees, and hard mast producers constitute more than 20 % of the canopy.



BOTTOMLAND HARDWOODS

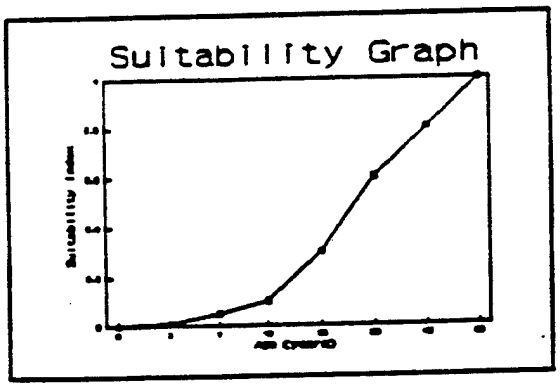
VARIABLE V2 - Stand Maturity [i.e., average age of canopy-dominant and canopy-codominant trees]

Notes:

1. When the average age of canopy-dominant and canopy-codominant trees is unknown, average tree diameter at breast height (dbh) can be used to determine the Suitability Index for this variable.

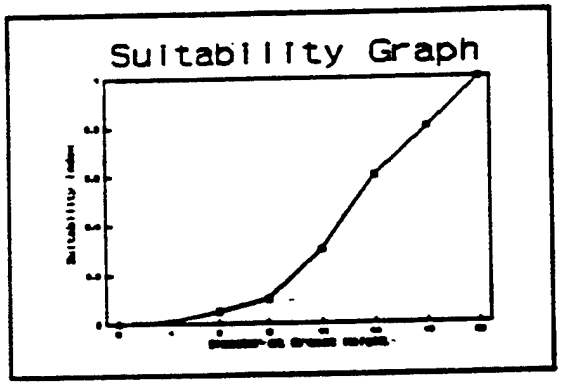
2. Canopy-dominant and canopy co-dominant trees are those trees whose crown rises above or is an integral part of the stand's overstory.

3. For trees with buttress swell, dbh is the diameter measured at 12" above the swell.



Suitability Index Line Formulas, when age is known:

If age = 0 then SI = 0.
If 0 < age ≤ 3 then SI = .0033 * age
If 3 < age ≤ 7 then SI = (.01 * age) - .02
If 7 < age ≤ 10 then SI = (.017 * age) - .07
If 10 < age ≤ 20 then SI = (.02 * age) - .1
If 20 < age ≤ 30 then SI = (.03 * age) - .3
If 30 < age ≤ 50 then SI = .02 * age
If age > 50 then SI = 1.0.



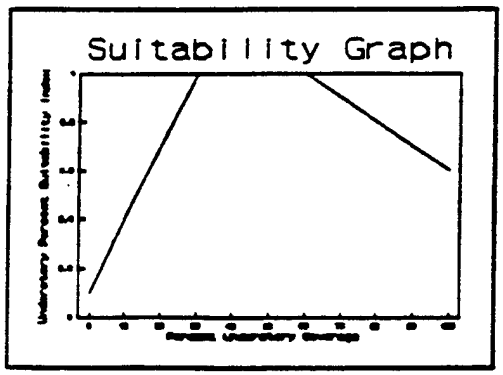
Suitability Index Line Formulas for bottomland hardwoods, when age is unknown:

If dbh = 0 then SI = 0
If 0 < dbh ≤ 5 then SI = .01 * dbh
If 5 < dbh ≤ 8 then SI = (.017 * dbh) - .035
If 8 < dbh ≤ 11 then SI = (.067 * dbh) - .436
If 11 < dbh ≤ 14 then SI = (.1 * dbh) - .8
If 14 < dbh ≤ 20 then SI= (.067 * dbh) - .338
If dbh > 20 then SI = 1.0.

BOTTOMLAND HARDWOODS

VARIABLE V3 - Understory / Midstory

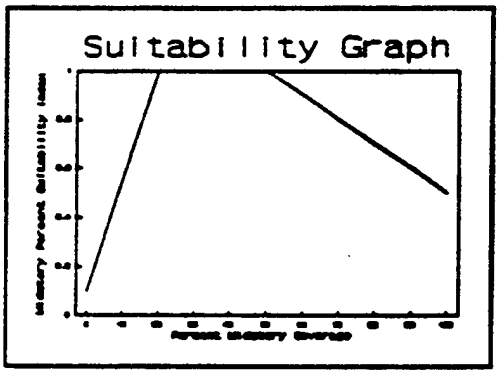
Understory



SI Line Formulas for Understory Coverage:

If understory % = 0 then SI = .1
If 0 < un. % ≤ 30 then SI = 0.03 * un. % + .1
If 30 < un % ≤ 60 then SI = 1.0
If un. % > 60 then SI = (-.01 * un %) + 1.6

Midstory



SI Line Formulas for Midstory Coverage:

If midstory % = 0, then SI = 0.1
If 0 < mid. % ≤ 20 then SI = .045 * mid. % + .1
If 20 < mid. % ≤ 50 then SI = 1.0
If mid. % > 50 then SI = (-.01 * mid. %) + 1.5

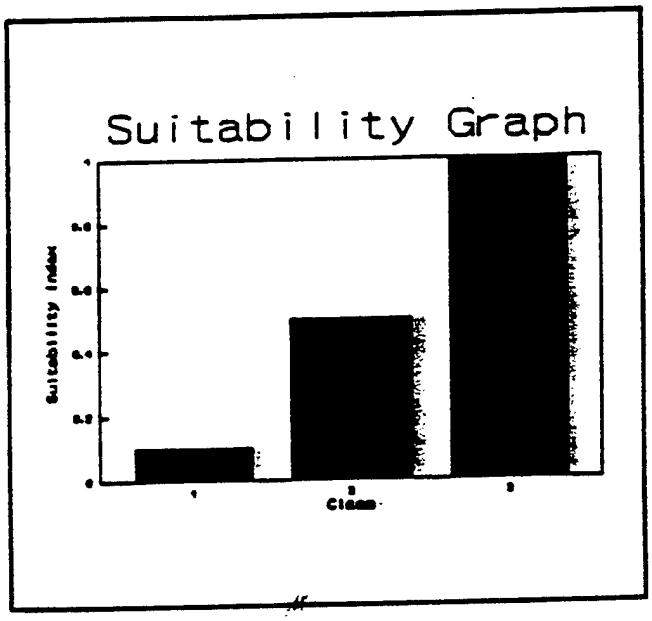
Understory / Midstory SI = Understory SI + Midstory SI / 2.

VARIABLE V4 - Hydrology

Class 1. Forced drainage system which efficiently removes water from the surface year round.

Class 2. Water table lowered relative to ground level so as to significantly reduce periods of inundation or water table raised so as to cause extended inundation or impoundment.

Class 3. Hydrology essentially unaltered (area could contain small levees and/or ditches, provided that water regime has not been significantly altered).



BOTTOMLAND HARDWOODS

VARIABLE V5 - Size of Contiguous Forested Area

Note: Corridors less than 75 feet wide do not constitute a break in the forested area contiguity.

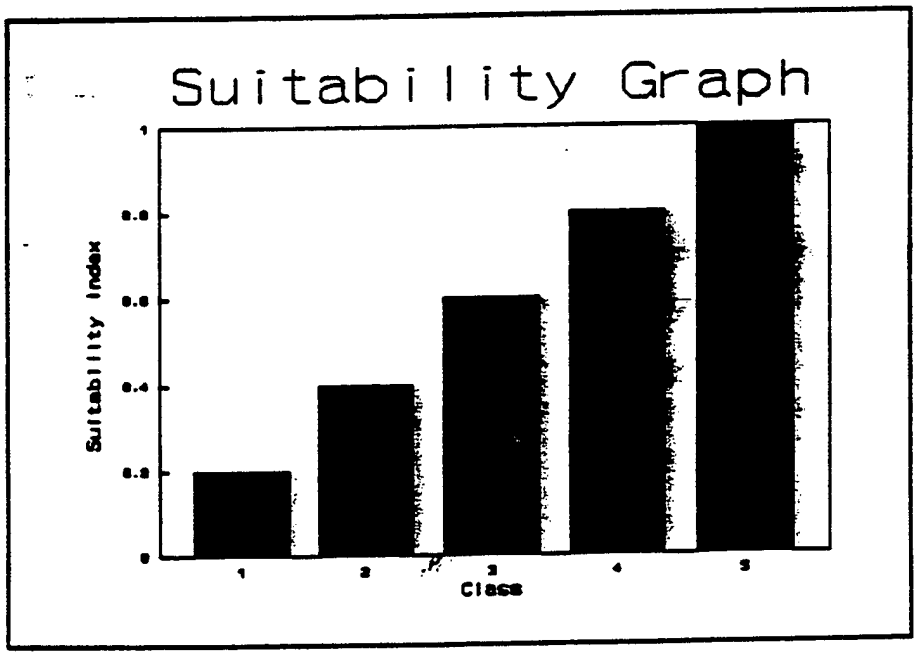
Class 1. 0 to 5 acres.

Class 2. 5.1 to 20 acres.

Class 3. 20.1 to 100 acres.

Class 4. 100.1 to 500 acres.

Class 5. > 500 acres.



VARIABLE V6 - Suitability and Traversability of Surrounding Land Uses

Within a 0.5 mile of the perimeter of the site, determine the percent of the area that is occupied by each of the following land uses (must account for 100 percent of the area). Multiply the percentage of each land use by the suitability weighting factor shown below, add the adjusted percentages and divide by 100 for a suitability index for this variable, except that if 100% of the Surrounding Habitat is considered nonhabitat, SI equals 0.01.

LAND USE	Weighting factor		% of 0.5 mi. circle		Weighted Percent
Bottomland hardwood, other forested areas, marsh habitat, etc.	1.0	X	____	=	____
Abandoned agriculture, overgrown fields, dense cover, etc.	0.6	X	____	=	____
Pasture, hayfields, etc.	0.4	X	____	=	____
Active agriculture.	0.2	X	____	=	____
Nonhabitat: linear, residential, commercial, industrial development, etc.	0.0	X	____	=	____

____/100 = SI

VARIABLE V7 - Disturbance

The effect of disturbance is a factor of the distance to, and the type of, disturbance, hence both are incorporated in the SI formula.

Note: Linear and/or large project sites may be exposed to various types of disturbances at various distances. The SI for this variable should be weighted to account for those variances; see the example calculation of a weighted SI for Disturbance on Page A-7.

Distance Classes

Class 1. 0 to 50 ft.

Class 2. 50.1 to 500 ft.

Class 3. > 500 ft.

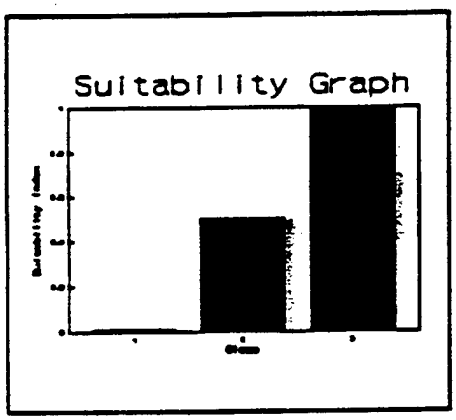
Type Classes

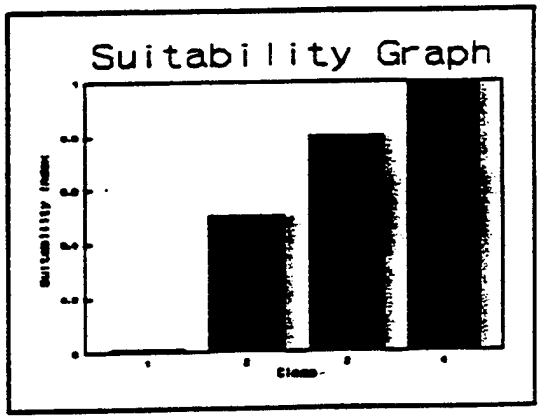
Class 1. Constant / Major (Major highways, industrial, commercial, major navigation.)

Class 2. Frequent / Moderate. (Residential development, moderately used roads, waterways commonly used by small to mid-sized boats.)

Class 3. Seasonal / Intermittent. (Agriculture, aquaculture.)

Class 4. Insignificant. (Lightly Used roads and waterways, individual homes, levees, rights of-way.)





SI Formula: (Distance SI + Type SI) / 2, except that if Distance > 500 feet (Class 3) or Type is Insignificant (Class 4), HSI = 1.0.

		Type Class			
		1	2	3	4
Distance Class	1	.01	.26	.41	1
	2	.26	.50	.65	1
	3	1	1	1	1

APPENDIX C

Common Names	Scientific Names
American elm	Ulmus americana
American sycamore	Platanus occidentalis
Baldcypress	Taxodium distichum
Black willow	Salix nigra
Boxelder	Acer negundo
Buttonbush	Cephalanthus occidentalis
Cedar elm	Ulmus crassifolia
Common persimmon	Diospyros virginiana
Eastern cottonwood	Populus deltoides
Green ash	Fraxinus pennsylvanica
Hickories	Carya spp.
Honeylocust	Gleditsia triacanthos
Oaks	Quercus spp.
Planertree	Planera aquatica
Red maple	Acer rubrum
Red mulberry	Morus rubra
Sugarberry	Celtis laevigata
Sweet pecan	Carya illinoensis
Sweetgum	Liquidambar styraciflua
Tupelogum	Nyssa aquatica

COASTAL WETLAND PLANNING, PROTECTION,

AND RESTORATION ACT

WETLAND VALUE ASSESSMENT METHODOLOGY

AND COMMUNITY MODELS

Developed by the Environmental Work Group,
Coastal Wetland Planning, Protection, and Restoration Act
Technical Committee

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Revised: May 2, 1994

COASTAL WETLAND PLANNING, PROTECTION AND RESTORATION ACT

Wetland Value Assessment Methodology and Community Models

I. INTRODUCTION

The Wetland Value Assessment (WVA) methodology is a quantitative habitat-based assessment methodology developed for use in prioritizing project proposals submitted for funding under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) of 1990. The WVA quantifies changes in fish and wildlife habitat quality and quantity that are projected to be brought about as a result of a proposed wetland enhancement project. The results of the WVA, measured in Average Annual Habitat Units (AAHU's), can be combined with economic data to provide a measure of the effectiveness of a proposed project in terms of annualized cost per AAHU gained.

The WVA was developed by the Environmental Work Group (Group) assembled under the Planning and Evaluation Subcommittee of the CWPPRA Technical Committee; the Group includes members from each agency represented on the CWPPRA Task Force. The WVA was designed to be applied, to the greatest extent possible, using only existing or readily obtainable data.

The WVA has been developed strictly for use in ranking proposed CWPPRA projects; it is not intended to provide a detailed, comprehensive methodology for establishing baseline conditions within a project area. Some aspects of the WVA have been defined by policy and/or functional considerations of the CWPPRA; therefore, user-specific modifications may be necessary if the WVA is used for other purposes.

The WVA is a modification of the Habitat Evaluation Procedures (HEP) developed by the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service 1980). HEP is widely used by the Fish and Wildlife Service and other Federal and State agencies in evaluating the impacts of development projects on fish and wildlife resources.

A notable difference exists between the two methodologies, however, in that HEP generally uses a species-oriented approach, whereas the WVA utilizes a community approach.

The WVA has been developed for application to the following coastal Louisiana wetland types: fresh marsh (including intermediate marsh), brackish marsh, saline marsh, and cypress-tupelo swamp. Future reference in this document to "wetland" or "wetland type" refers to one or more of those four communities.

II. WVA CONCEPT

The WVA operates under the assumption that optimal conditions for fish and wildlife habitat within a given coastal wetland type can be characterized, and that existing or predicted conditions can be compared to that optimum to provide an index of habitat quality. Habitat quality is estimated or expressed through the use of a mathematical model developed specifically for each wetland type. Each model consists of 1) a list of variables that are considered important in characterizing fish and wildlife habitat, 2) a Suitability Index graph for each variable, which defines the assumed relationship between habitat quality (Suitability Index) and different variable values, and 3) a mathematical formula that combines Suitability Index for each variable into a single value for wetland habitat quality; that single value is referred to as the Habitat Suitability Index, or HSI.

The Wetland Value Assessment models (Attachments 1-4) have been developed for determining the suitability of Louisiana coastal wetlands in providing resting, foraging, breeding, and nursery habitat to a diverse assemblage of fish and wildlife species. Models have been designed to function at a community level and therefore attempt to define an optimum combination of habitat conditions for <u>all</u> fish and wildlife species utilizing a given marsh type over a year or longer. Earlier attempts to capture other wetland functions and values such as storm-surge protection, flood water storage, water quality functions and nutrient import/export were abandoned due to the difficulty in defining unified model relationships and meaningful model outputs for such

a variety of wetland benefits. However, the ability of a Louisiana coastal wetland to provide those functions and values may be generally assumed to be positively correlated with fish and wildlife habitat quality as predicted through the WVA.

The output of each model (the HSI) is assumed to have a linear relationship with the suitability of a coastal wetland system in providing fish and wildlife habitat.

III. COMMUNITY MODEL VARIABLE SELECTION

Habitat variables considered appropriate for describing habitat quality in each wetland type were selected according to the following criteria:

1) the condition described by the variable had to be important in characterizing fish and wildlife habitat quality in the wetland type under consideration;

2) values had to be easily estimated and predicted based on existing data (e.g., aerial photography, LANDSAT, GIS systems, water quality monitoring stations, and interviews with knowledgeable individuals); and

3) the variable had to be sensitive to the types of changes expected to be brought about by typical wetland projects proposed under the CWPPRA.

Variables for each model were selected through a two part procedure. The first involved a listing of environmental variables thought to be important in characterizing fish and wildlife habitat in coastal marsh or swamp systems.

The second part of the selection procedure involved reviewing variables used in species-specific HSI models published by the U.S. Fish and Wildlife Service. Review was limited to models for those fish and wildlife species known to inhabit Louisiana coastal wetlands, and included models for 10 estuarine fish and shellfish,

4 freshwater fish, 12 birds, 3 reptiles and amphibians, and 2 mammals (Attachment 7). The number of models included from each species group was dictated by model availability.

Selected HSI models were then grouped according to the wetland type(s) used by each species. Because most species for which models were considered are not restricted to one wetland type, most models were included in more than one wetland type group. Within each wetland type group, variables from all models were then grouped according to similarity (e.g., water quality, vegetation, etc.). Each variable was evaluated based on 1) whether it met the variable selection criteria; 2) whether another, more easily measured/predicted variable in the same or a different similarity group functioned as a surrogate; and 3) whether it was deemed suitable for the WVA application (e.g., some freshwater fish model variables dealt with riverine or lacustrine environments). Variables that did not satisfy those conditions were eliminated from further consideration. The remaining variables, still in their similarity groups, were then further eliminated or refined by combining similar variables and/or culling those that were functionally duplicated by variables from other models (i.e., some variables were used frequently in different models in only slightly different format, such as percent marsh coverage, salinity, etc.).

Variables selected from the HSI models were then compared to those identified in the first part of the selection procedure to arrive at a final list of variables to describe wetland habitat quality. That list includes six variables for each of the marsh types and three for the cypress-tupelo swamp (Attachments 1-4).

IV. SUITABILITY INDEX GRAPHS

Suitability Index graphs were constructed for each variable selected within a wetland type. A Suitability Index (SI) graph is a graphical representation of how fish and wildlife habitat quality or "suitability" of a given wetland type is predicted to change as values of the given variable change, and allows the model user to numerically describe, through a Suitability Index, the habitat quality of a wetland area for any variable value. Each Suitability

Index ranges from 0.0 to 1.0, with 1.0 representing the optimum condition for the variable in question.

A variety of resources were utilized to construct each Suitability Index (SI) graph, including personal knowledge of Group members, the species HSI models from which the final list of variables was partially derived, consultation with other professionals and researchers outside the Group, and published and unpublished data and studies. An important "non-biological" constraint on SI graph development was the need to insure that graph relationships were not counter to the purpose of the CWPPRA, that is, the long term creation, restoration, protection, or enhancement of coastal vegetated wetlands. That constraint was most operative in defining SI graphs for Variable 1 under each marsh model (see discussion below).

The process of graph development was one of constant evolution, feedback, and refinement; the form of each Suitability Index graph was decided upon through consensus among Group members.

V. SUITABILITY INDEX GRAPH ASSUMPTIONS

Suitability Index graphs were developed according to the following assumptions:

1. Fresh/Intermediate Marsh Model

Variable V_1- Percent of wetland covered by persistent emergent vegetation (≥ 10 percent canopy cover). Persistent emergent vegetation plays an important role in coastal wetlands by providing foraging, resting, and breeding habitat for a variety of fish and wildlife species; and by providing a source of detritus and energy for lower trophic organisms that form the basis for the food chain. An area with no marsh (i.e., shallow open water) is assumed to have minimal habitat suitability in terms of this variable, and is assigned an SI of 0.1.

Optimum vegetation coverage in a fresh/intermediate marsh is

assumed to occur at 100 percent persistent emergent vegetation cover (SI=1.0). That assumption is dictated primarily by the constraint of not having graph relationships conflict with the CWPPRA's purpose of long term creation, restoration, protection, or enhancement of coastal vegetated wetlands. The Group had originally developed a strictly biologically-based graph defining optimum habitat conditions at marsh cover values between 60 and 80 percent, and sub-optimum habitat conditions at 100 percent cover. However, application of that graph, in combination with the time analysis used later in the evaluation process, often reduced project benefits or generated a net loss of habitat quality through time with the project. Those situations arose primarily when: existing (baseline) emergent vegetation cover exceeded the optimum (> 80 percent); the project was predicted to maintain baseline cover values; and without the project the marsh was predicted to degrade, with a concurrent decline in percent emergent vegetation cover into the optimum range (60-80 percent). The time factor aggravated the situation when the without-project degradation was not rapid enough to reduce marsh cover values significantly below the optimum range, or below the baseline SI, within the 20-year evaluation period. In those cases, the analysis would show net negative benefits for the project, and positive benefits for letting the marsh degrade rather than maintaining the existing marsh. Coupling that situation with the presumption that marsh conditions are not static, and that Louisiana will continue to lose coastal emergent marsh; and taking into account the purpose of the CWPPRA, the Group decided that, all other factors being equal, the WVA should favor projects that maximize emergent marsh creation, maintenance, and protection. Therefore, the Group agreed to deviate from a strict biologically-based habitat suitability graph for V_1 by setting optimum habitat conditions at 100 percent marsh cover.

Variable V_2- Percent of open water area dominated (> 50 percent canopy cover) by aquatic vegetation. Fresh and intermediate marshes often support diverse communities of floating-leaved and submerged aquatic plants that provide important food and cover to a wide variety of fish and wildlife species. A fresh/intermediate open water area with

no aquatics is assumed to have low suitability (SI=0.1). Optimum condition (SI=1.0) is assumed to occur when 100 percent of the open water is dominated by aquatic vegetation. Habitat suitability may be assumed to decrease with aquatic plant coverage approaching 100 percent due to the potential for mats of aquatic vegetation to hinder fish and wildlife utilization; to adversely affect water quality by reducing photosynthesis by phytoplankton and other plant forms due to shading; and contribute to oxygen depletion spurred by warm-season decay of large quantities of aquatic vegetation. The Group recognized, however, that those affects were highly dependent on the dominant aquatic plants species, their growth forms, and their arrangement in the water column; thus, it is possible to have 100 percent cover of a variety of floating and submerged aquatic plants without the above-mentioned problems due to differences in plant growth form and stratification of plants through the water column. Because predictions of which species may dominate at any time in the future would be tenuous, at best, the Group decided to simplify the graph and define optimum conditions at 100 percent aquatic cover.

Variable V_3- Marsh edge and interspersion. This variable takes into account the relative juxtaposition of marsh and open water for a given marsh:open water ratio, and is measured by comparing the project area to sample illustrations (Attachment 5) depicting different degrees of interspersion. Interspersion is assumed to be especially important when considering the value of an area as foraging and nursery habitat for freshwater and estuarine fish and shellfish; the marsh/open water interface represents an ecotone where prey species often concentrate, and where post-larval and juvenile organisms can find cover. Isolated marsh ponds are often more productive in terms of aquatic vegetation than are larger ponds due to decreased turbidities, and, thus, may provide more suitable waterfowl habitat. However, interspersion <u>can</u> be indicative of marsh degradation, a factor taken into consideration in assigning suitability indices to the various Interspersion Types.

A relatively high degree of interspersion in the form of stream courses and tidal channels (Interspersion Type 1, Attachment 5) is assumed to be optimal (SI=1.0); streams and

channels offer interspersion, yet are not indicative of active marsh deterioration. Areas exhibiting a high degree of marsh cover are also ranked as optimum, even though interspersion may be low, to avoid conflicts with the premises underlying the SI graph for variable V_3. Without such an allowance, areas of relatively healthy, solid marsh, or projects designed to create marsh, would be penalized with respect to interspersion. Numerous small marsh ponds (Interspersion Type 2) offer a high degree of interspersion, but are also usually indicative of the beginnings of marsh break-up and degradation, and are therefore assigned a more moderate SI of 0.6. Large open water areas (Interspersion Types 3 and 4) offer lower interspersion values and usually indicate advanced stages of marsh loss, and are thus assigned SI's of 0.4 and 0.2, respectively. The lowest expression of interspersion (i.e., no emergent marsh at all within the project area) is assumed to be least desirable and is assigned an SI=0.1.

Variable V_4- Percent of open water area ≤ 1.5 feet deep in relation to marsh surface. Shallow water areas are assumed to be more biologically productive than deeper water due to a general reduction in sunlight, oxygen, and temperature as water depth increases. Also, shallower water provides greater bottom accessibility for certain species of waterfowl, better foraging habitat for wading birds, and more favorable conditions for aquatic plant growth. Optimum depth in a fresh/intermediate marsh is assumed to occur when 80 to 90 percent of the open water area is less than or equal to 1.5 feet deep. The value of deeper areas in providing drought refugia for fish, alligators and other marsh life is recognized by assigning an SI=0.6 (i.e., sub-optimal) if all of the open water is less than or equal to 1.5 feet deep.

Variable V_5- Mean high salinity during the growing season. It is assumed that periods of high salinity are most detrimental in a fresh/intermediate marsh when they occur during the growing season (defined as March through November, based on dates of first and last frost contained in Soil Conservation Service soil surveys for coastal Louisiana). Mean high salinity is defined as the average of the upper 33 percent of salinity readings taken during a

specified period of record. Optimum condition in fresh marsh is assumed to occur when mean high salinity during the growing season is less than 2 parts per thousand (ppt). Optimum condition in intermediate marsh is assumed to occur when mean high salinity during the growing season is less than 4 ppt.

Variable V_6- Aquatic organism access. Access by aquatic organisms, particularly estuarine fishes and shellfishes, is considered to be a critical component in assessing the "quality" or suitability of a given marsh system to provide habitat to those species. Additionally, a marsh with a relatively high degree of access by default also exhibits a relatively high degree of hydrologic connectivity with adjacent systems, and therefore may be considered to contribute more to nutrient exchange than would a marsh exhibiting a lesser degree of access. The Suitability Index for V_7 is determined by calculating an "Access Value" based on the interaction between the percentage of the project area wetlands considered accessible by estuarine organisms during normal tidal fluctuations, and the type of man-made structures (if any) across identified points of ingress/egress (bayous, canals, etc.). Standardized procedures for calculating the Access Value have been established (Attachment 6). Optimum condition is assumed to exist when all of the study area is accessible and the access points are entirely open and unobstructed. A fresh/intermediate marsh with no access is assigned an SI=0.3, reflecting the assumption that, while fresh/intermediate marshes are important to some species of estuarine fishes and shellfish, such a marsh lacking access continues to provide benefits to a wide variety of other wildlife and fish species, and is not without habitat value.

2. Brackish Marsh Model

Variable V_1- Percent of wetland covered by persistent emergent vegetation (≥ 10 percent canopy cover). Refer to the V_1 discussion under the fresh/intermediate marsh model for a discussion of the importance of persistent emergent vegetation in coastal marshes. The V_1 Suitability Index graph in the brackish marsh model is identical to that in

the fresh/intermediate model.

Variable V_2- Percent of open water area dominated (> 50 percent canopy cover) by aquatic vegetation. Like fresh/intermediate marshes, brackish marshes have the potential to support aquatic plants that serve as important sources of food and cover for a wide variety of wildlife. However, brackish marshes generally do not support the amounts and kinds of aquatic plants that occur in fresh/intermediate marshes (although certain species, such as widgeon-grass, can occur abundantly under certain conditions). Therefore, a brackish marsh entirely lacking aquatic plants is assigned an SI=0.3. It is assumed that optimum open water coverage of aquatic plants in a brackish marsh occurs at 100 percent aquatic cover.

Variable V_3- Marsh edge and interspersion. The Suitability Index graph for edge and interspersion in the brackish marsh model is the same as that in the fresh/intermediate marsh model.

Variable V_4- Open water depth in relation to marsh surface. As in the fresh/intermediate model, shallow water areas in brackish marsh habitat are assumed to be important. However, brackish marsh generally exhibits deeper open water areas than fresh marsh due to tidal scouring. Therefore, the SI graph is constructed so that lower percentages of shallow water receive higher SI values relative to fresh/intermediate marsh. Optimum open water depth condition in a brackish marsh is assumed to occur when 70 to 80 percent of the open water area is less than or equal to 1.5 feet deep.

Variable V_5- Average annual salinity. The suitability index graph is constructed to represent optimum average annual salinity condition at between 0 ppt and 10 ppt. The Group acknowledges that average annual salinites below 6 ppt will effectively define a marsh as fresh or intermediate, not brackish. However, the suitability index graph makes allowances for lower salinities (i.e., < 6 ppt) to account for occasions when there is a trend of decreasing salinities through time toward a more intermediate condition. Implicit in keeping the graph at optimum for salinites less than 6

ppt is the assumption that lower salinites are not detrimental to a bracksih marsh. However, average annual salinites greater than 10 ppt are assumed to be progressively more harmful to brackish marsh vegetation, as illustrated in the downward sloping right leg of the suitability index graph. Average annual salinities greater than 16 ppt are assumed to be representative of those found in a saline marsh, and thus are not considered in the brackish marsh model.

Variable V_6- Aquatic organism access. The general rational and procedure behind the V_6 Suitability Index graph for the brackish marsh model is identical to that established for the fresh/intermediate model. However, brackish marshes are assumed to be more important as providers of habitat to estuarine fish and shellfish than fresh/intermediate marshes. Therefore, a brackish marsh providing no access is assigned an SI of 0.1.

3. **Saline Marsh Model**

Variable V_1- Percent of wetland covered by persistent emergent vegetation (≥ 10 percent canopy cover). Refer to the V_1 discussion under the fresh/intermediate marsh model for a discussion of the importance of persistent emergent vegetation in coastal marshes. The V_1 Suitability Index graph in the saline marsh model is identical to that in the fresh/intermediate and brackish models.

Variable V_2- Percent of open water area dominated (> 50 percent canopy cover) by aquatic vegetation. Refer to the V_2 discussion under the brackish marsh model for a discussion of persistent emergent vegetation in more saline coastal marshes. The V_2 Suitability Index graph in the saline marsh model is identical to that in the brackish model.

Variable V_3- Marsh edge and interspersion. The Suitability Index graph for edge and interspersion in the saline marsh model is the same as that in the fresh/intermediate and brackish marsh models.

Variable V_4- Open water depth in relation to marsh surface. The Suitability Index graph for open water depth in the saline marsh is similar to that for brackish marsh, where optimum conditions are assumed to occur when 70 to 80 percent of the open water area is less than or equal to 1.5 feet deep. However, at 100 percent shallow water, the saline graph yields an SI= 0.5 rather than 0.6 for the brackish model. That change reflects the increased abundance of tidal channels and generally deeper water conditions prevailing in a saline marsh due to increased tidal influences, and the importance of those tidal channels to estuarine organisms.

Variable V_5- Average annual salinity. The Suitability Index graph is constructed to represent optimum salinity conditions at between 9 ppt and 21 ppt. The Group acknowledges that average annual salinites between 9 and 12 ppt will effectively define a marsh as brackish, not saline. However, the suitability index graph makes allowances for lower salinities (i.e., < 12 ppt) to account for occasions when there is a trend of decreasing salinities through time toward a more brackish condition. Implicit in keeping the graph at optimum for salinites less than 12 ppt is the assumption that lower salinites (9-12 ppt) are not detrimental to a saline marsh. Average annual salinites greater than 21 ppt are assumed to be slightly stressful to saline marsh vegetation, as illustrated in the downward sloping right leg of the suitability index graph.

Variable V_6- Aquatic organism access. The Suitability Index graph for aquatic organism access in the saline marsh model is the same as that in the brackish marsh model.

4. Cypress-Tupelo Swamp Model

Variable V_1- Water regime. Four water regime categories are described for the cypress-tupelo swamp model. The optimum water regime for a cypress-tupelo swamp is assumed to be seasonal flooding (SI=1.0); seasonal flooding with periodic drying cycles is assumed to contribute to increased nutrient cycling (primarily through oxidation and decomposition of accumulated detritus), increased vertical structure

complexity (due to growth of other plants on the swamp floor), and increased recruitment of dominant overstory trees. Semipermanent flooding is also assumed to be desirable, as reflected in the SI=0.8 for that water regime category. Permanent flooding is assumed to be the least desirable (SI=0.2).

Variable V_2- Water flow/exchange. This variable attempts to take into consideration the amounts and types of water inputs into a cypress-tupelo swamp. The Suitability Index graph is constructed under the assumption that abundant and consistent riverine input and water flow-through is optimum (SI=1.0), because under that regime the full functions and values of a cypress-tupelo swamp in providing fish and wildlife habitat are assumed to be maximized. Habitat suitability is assumed to decrease as water exchange between the swamp and adjacent systems is reduced. A swamp system with no water exchange (e.g., an impounded swamp where the only water input is through rainfall and the only water loss is through evapotranspiration and ground seepage) is assumed to be least desirable, and is assigned an SI= 0.2.

Variable V_3- Average high salinity. Average high salinity is defined as the average of the upper 33 percent of salinity measurements taken during a specified period of record. Because baldcypress is salinity-sensitive, optimum conditions for baldcypress survival are assumed to occur at average high salinities less than 1 ppt. Habitat suitability is assumed to decrease rapidly at average high salinities in excess of 1 ppt.

VI. HABITAT SUITABILITY INDEX FORMULA

The final step in WVA model development was to construct a mathematical formula that combines all Suitability Indices for each wetland type into a single Habitat Suitability Index (HSI) value. Because the Suitability Indices range in value from 0.0 to 1.0, the HSI also ranges in from 0.0 to 1.0, and is a numerical representation of the overall or "composite" habitat quality of the particular wetland study area being evaluated. The HSI formula defines the aggregation of Suitability Indices in a manner unique

to each wetland type depending on how the formula is constructed.

Within an HSI formula, any Suitability Index can be weighted by various means to increase the power or "importance" of that variable relative to the other variables in determining the HSI. Additionally, two or more variables can be grouped together into subgroups to further isolate variables for weighting.

In constructing HSI formulas for the marsh models, the Group recognized that the primary focus of the CWPPRA is on vegetated wetlands, and that some marsh protection strategies could have adverse impacts to estuarine organism access. Therefore, the Group made an *a priori* decision to emphasize variables V_1, V_2, and V_6 by grouping and weighting them together. Weighting was facilitated by treating the grouped variables as a geometric mean. Variables V_3, V_4, and V_5 were grouped to isolate their influence relative to V_1, V_2, and V_6.

For all marsh models, V_1 receives the strongest weighting. The relative weights of V_2 and V_6 differ by marsh model to reflect differing levels of importance for those variables between the marsh types. For example, the amount of aquatic vegetation was deemed more important in the context of a fresh/intermediate marsh than in a saline marsh, due to the relative contributions of aquatic vegetation between the two marsh types in terms of providing food and cover. Therefore, V_2 receives more weight in the fresh/intermediate HSI formula than in the saline HSI formula. Similarly, the degree of estuarine organism access was considered more important in a saline marsh than a fresh/intermediate marsh, and V_6 receives more weight in the saline HSI formula than in the fresh/intermediate formula.

As with the Suitability Index graphs, the Habitat Suitability Index formulas were developed by consensus among the Group members.

VI. BENEFIT ASSESSMENT

The net benefits of a proposed project are estimated by predicting

future habitat conditions under two scenarios: with the proposed project in place and without the proposed project. Specifically, predictions are made as to how the model variables will change through time under the two scenarios. Through that process, HSI's are established for baseline (pre-project) conditions and for future-with- and future-without-project scenarios for selected "target years" throughout the expected life of the project. Those HSI's are then multiplied by the acreage of wetland type known or expected to be present in the target years to arrive at Habitat Units.

Habitat Units (HU's) represent a numerical combination of quality (HSI) and quantity (acres) existing at any given point in time. The "benefit" of a project can be quantified by comparing HU's between the future-with and future-without-project scenarios. The difference in HU's between the two scenarios represents the net benefit attributable to the project in terms of habitat quantity and quality.

The HU's resulting from the future-with- and future-without-project scenarios are annualized, averaged out over the project life, and compared to determine the net gain in average annual HU's (AAHU's) attributable to the project. Net gain in AAHU's is then combined with annualized cost data to arrive at a cost per AAHU for the evaluated project. That figure is compared to the same figure from other projects in order to rank all proposed projects in order of cost per AAHU.

LITERATURE CITED

U. S. Fish and Wildlife Service. 1980. Habitat evaluation procedures (HEP). Div. Ecol. Serv. ESM 102, U. S. Fish and Wildl. Serv., Washington, DC. 141pp.

Revised June 2, 1993

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Fresh/Intermediate Marsh

Vegetation:

Variable V_1 Percent of wetland area covered by emergent vegetation (≥ 10% canopy cover).

Variable V_2 Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.

Interspersion:

Variable V_3 Marsh edge and interspersion.

Water Depth:

Variable V_4 Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.

Water Quality:

Variable V_5 Mean high salinity during the growing season (March through November).

Aquatic Organism Access:

Variable V_6 Aquatic organism access.

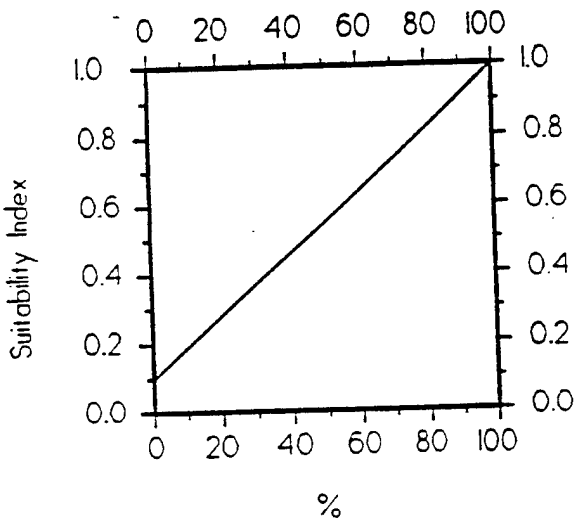
HSI Calculation:

$$HSI = \frac{\left[3.5 \times (SIV_1^{3} \times SIV_2^{1.2} \times SIV_6^{0.5})^{(1/4.7)}\right] + \left[\frac{(SIV_3 + SIV_4 + SIV_5)}{3}\right]}{4.5}$$

FRESH/INTERMEDIATE MARSH

Variable V_1 Percent of wetland area covered by emergent vegetation (≥ 10% canopy cover).

Suitability Graph

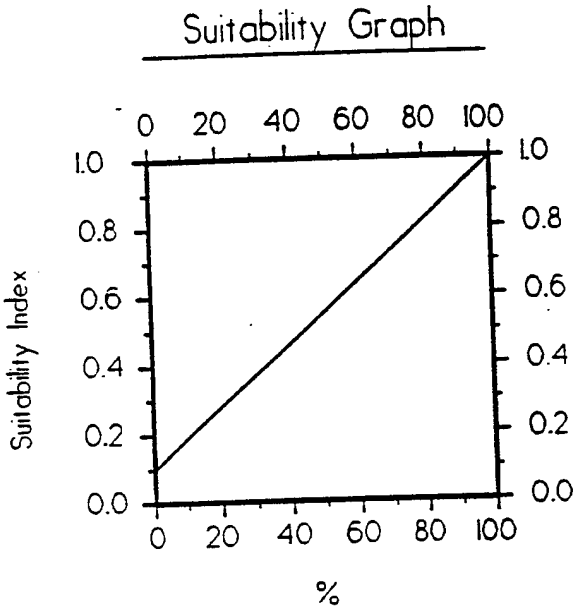


Line Formulas

SI = (0.009 * %) + 0.1

FRESH/INTERMEDIATE MARSH

Variable V_2 Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.



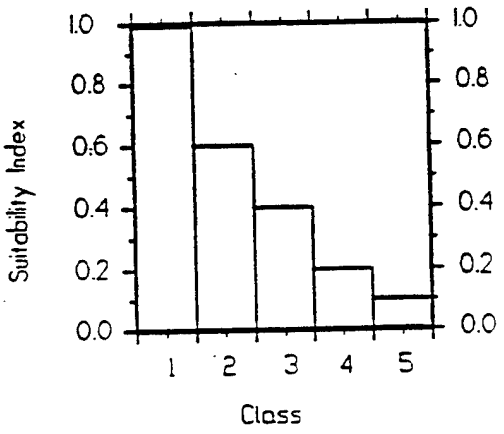
Line Formulas

SI = (0.009 * %) + 0.1

FRESH/INTERMEDIATE MARSH

Variable V_3 Marsh edge and interspersion.

Suitability Graph



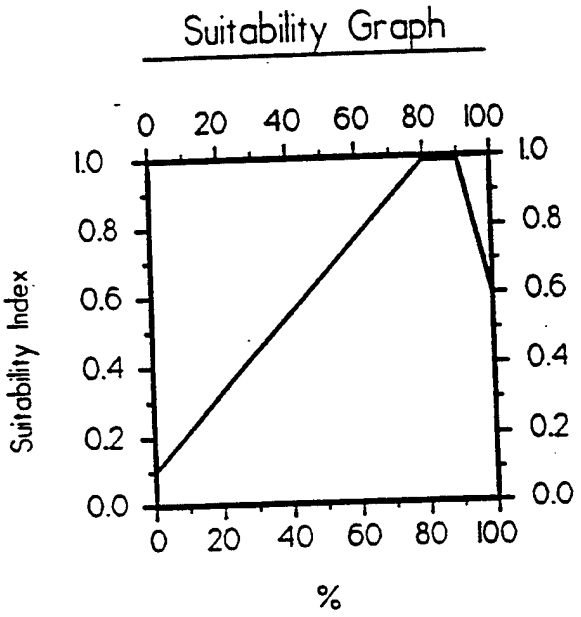
Instructions for Calculating SI for Variable 3:

1. Refer to Attachment 5 for examples of the different interspersion classes (=types).

2. Estimate percent of project area in each class and compute a weighted average to arrive at SIV_3. If the entire project area is solid marsh, assign an interspersion class #1 (SI=1.0). Conversely, if the entire project area is open water, assign an interspersion class #5 (SI=0.1).

FRESH/INTERMEDIATE MARSH

Variable V_4 Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.



Line Formulas

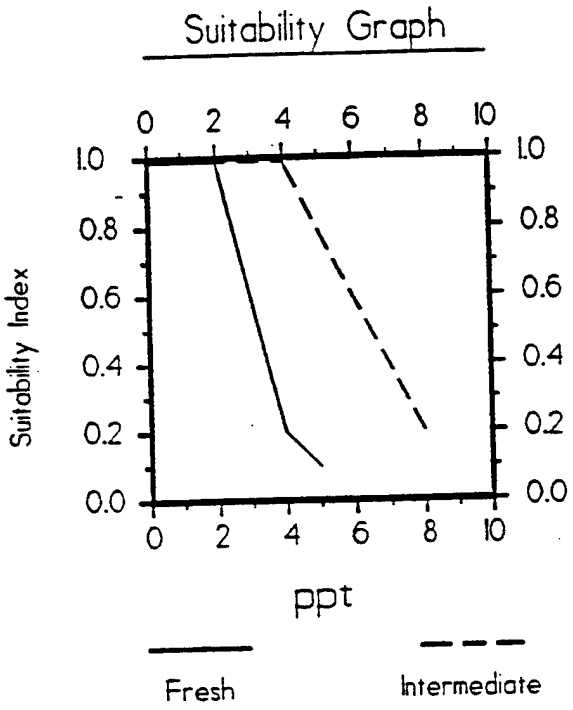
If 0 ≤ % < 80, then SI = (0.01125 * %) + 0.1

If 80 ≤ % < 90, then SI = 1.0

If % ≥ 90, then SI = (-0.04 * %) + 4.6

FRESH/INTERMEDIATE MARSH

Variable V_5 Mean high salinity during the growing season (March through November).



Line Formulas

Fresh Marsh:

If $0 \leq ppt < 2$, then $SI = 1.0$
If $2 \leq ppt < 4$, then $SI = (-0.4 * ppt) + 1.8$
If $4 \leq ppt \leq 5$ then $SI = (-0.1 * ppt) + 0.6$

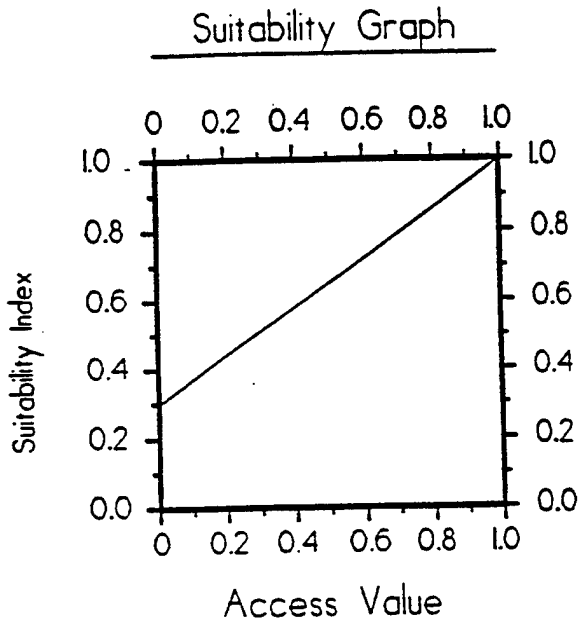
Intermediate Marsh:

If $0 \leq ppt < 4$, then $SI = 1.0$
If $4 \leq ppt \leq 8$, then $SI = (-0.2 * ppt) + 1.8$

NOTE: Mean high salinity is defined as the average of the upper 33 percent of salinity readings taken during the period of record.

FRESH/INTERMEDIATE MARSH

Variable V_6 Aquatic organism access.



Line Formula

SI = (0.7 * Access Value) + 0.3

NOTE: Access Value = P * R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

Refer to Attachment 6 "Procedure For Calculating Access Value" for complete information on calculating "P" and "R" values.

Revised May 2, 1994

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Brackish Marsh

Vegetation:

Variable V_1 Percent of wetland area covered by emergent vegetation (≥ 10% canopy cover).

Variable V_2 Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.

Interspersion:

Variable V_3 Marsh edge and interspersion.

Water Depth:

Variable V_4 Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.

Water Quality:

Variable V_5 Average annual salinity.

Aquatic Organism Access:

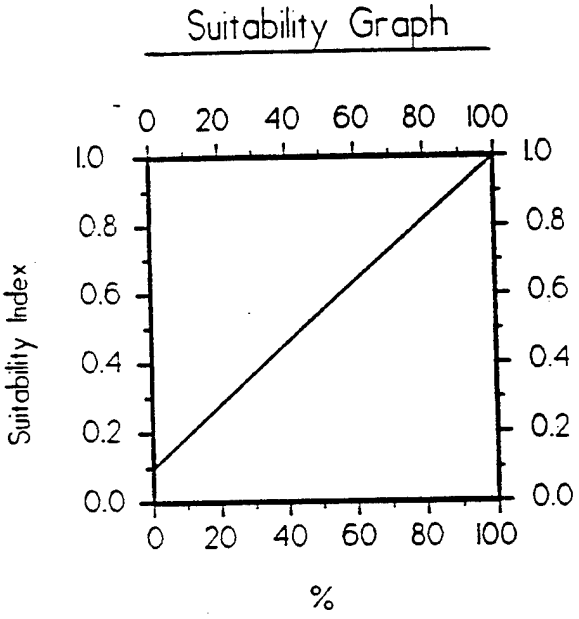
Variable V_6 Aquatic organism access.

HSI Calculation:

$$HSI = \frac{\left[3.5 \times (SIV_1^3 \times SIV_2 \times SIV_6)^{(1/5)}\right] + \left[\frac{(SIV_3 + SIV_4 + SIV_5)}{3}\right]}{4.5}$$

BRACKISH MARSH

Variable V_1 Percent of wetland area covered by emergent vegetation (≥ 10% canopy cover).

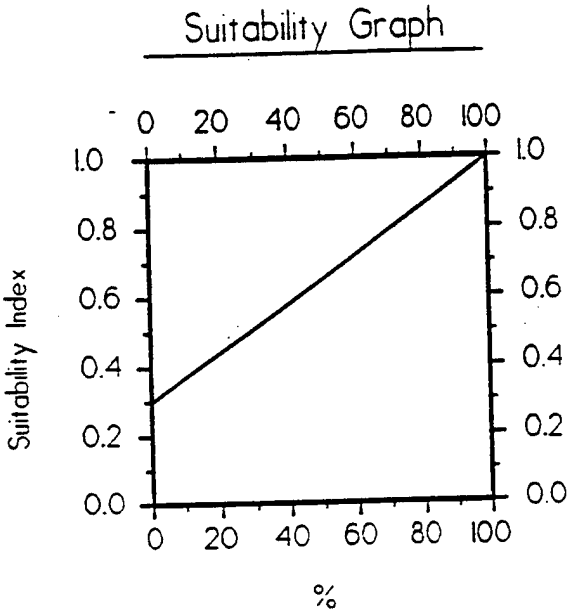


Line Formulas

SI = (0.009 * %) + 0.1

BRACKISH MARSH

Variable V_2 Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.



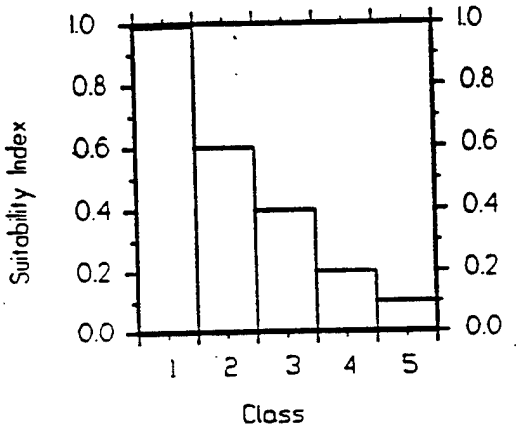
Line Formulas

SI = (0.007 * %) + 0.3

BRACKISH MARSH

Variable V_3 Marsh edge and interspersion.

Suitability Graph



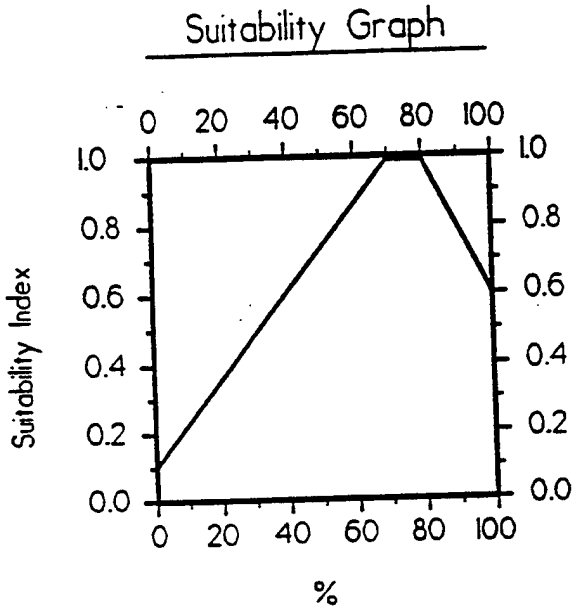
Instructions for Calculating SI for Variable 3:

1. Refer to Attachment 5 for examples of the different interspersion classes (=types).

2. Estimate percent of project area in each class and compute a weighted average to arrive at SIV_3. If the entire project area is solid marsh, assign an interspersion class #1 (SI=1.0). Conversely, if the entire project area is open water, assign an interspersion class #5 (SI=0.1).

BRACKISH MARSH

Variable V_4 Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.



Line Formulas

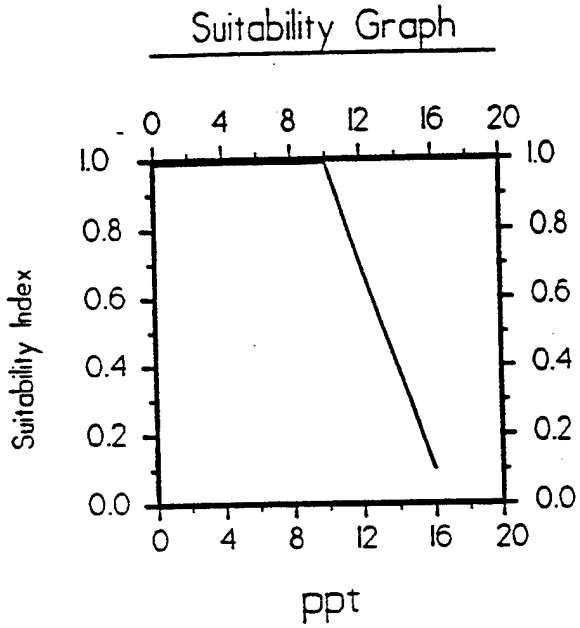
If 0 ≤ % < 70, then SI = (0.01286 * %) + 0.1

If 70 ≤ % < 80, then SI = 1.0

If % ≥ 80, then SI = (-0.02 * %) + 2.6

BRACKISH MARSH

Variable V_5 Average annual salinity.



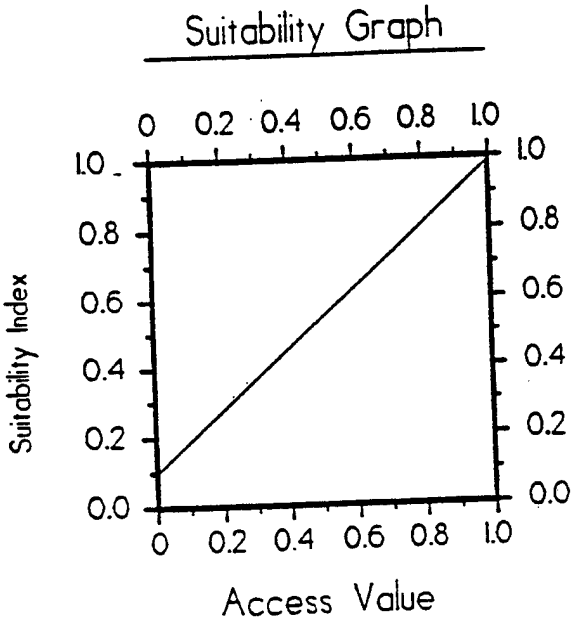
Line Formulas

If $0 \leq ppt < 10$, then $SI = 1.0$

If $ppt \geq 10$, then $SI = (-0.15 * ppt) + 2.5$

BRACKISH MARSH

Variable V_6 Aquatic organism access.



Line Formula

SI = (0.9 * Access Value) + 0.1

Note: Access Value = P * R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

Refer to Attachment 6 "Procedure For Calculating Access Value" for complete information on calculating "P" and "R" values.

Revised May 2, 1994

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Saline Marsh

Vegetation:

Variable V_1 Percent of wetland area covered by emergent vegetation (≥ 10% canopy cover).

Variable V_2 Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.

Interspersion:

Variable V_3 Marsh edge and interspersion.

Water Depth:

Variable V_4 Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.

Water Quality:

Variable V_5 Average annual salinity.

Aquatic Organism Access:

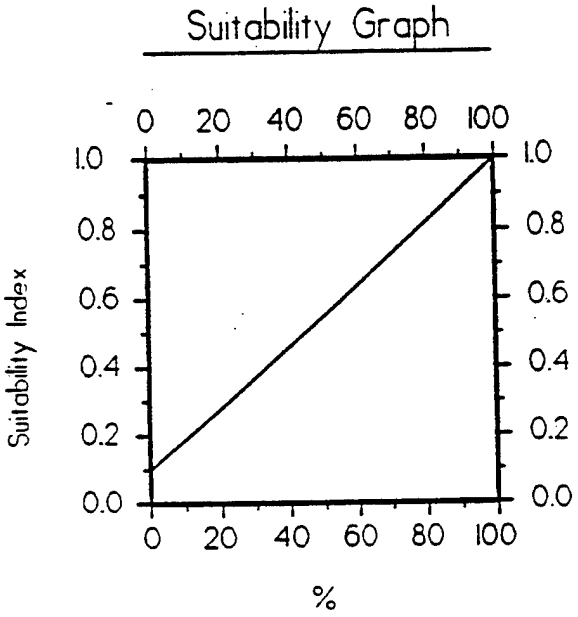
Variable V_6 Aquatic organism access.

HSI Calculation:

$$HSI = \frac{\left[3.5 \times (SIV_1^{3} \times SIV_2^{0.5} \times SIV_6^{1.2})^{(1/4.7)}\right] + \left[\frac{(SIV_3 + SIV_4 + SIV_5)}{3}\right]}{4.5}$$

SALINE MARSH

Variable V_1 Percent of wetland area covered by emergent vegetation (≥ 10% canopy cover).

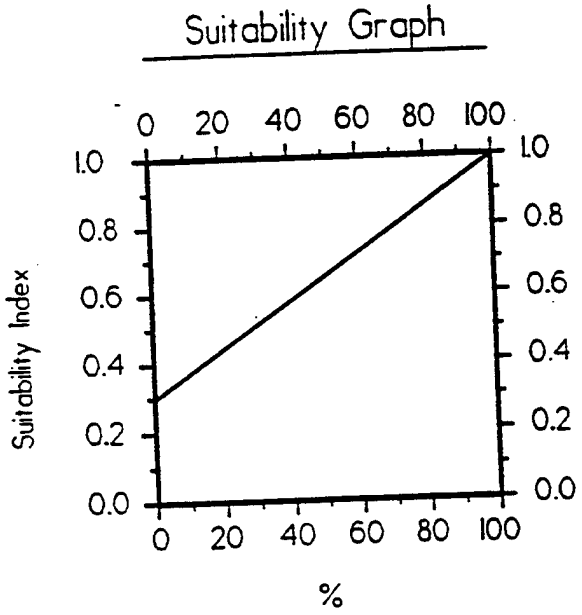


Line Formulas

SI = (0.009 * %) + 0.1

SALINE MARSH

Variable V_2 Percent of open water area dominated (> 50% canopy cover) by aquatic vegetation.



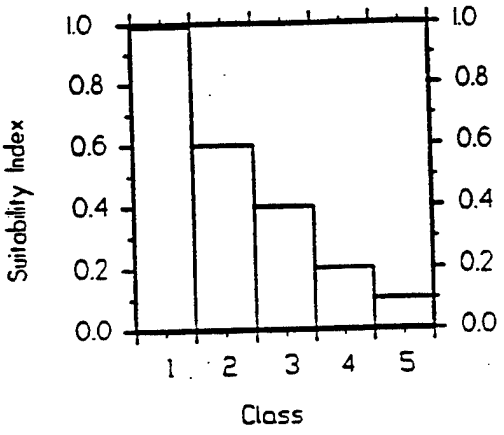
Line Formulas

SI = (0.007 * %) + 0.3

SALINE MARSH

Variable V_3 Marsh edge and interspersion.

Suitability Graph



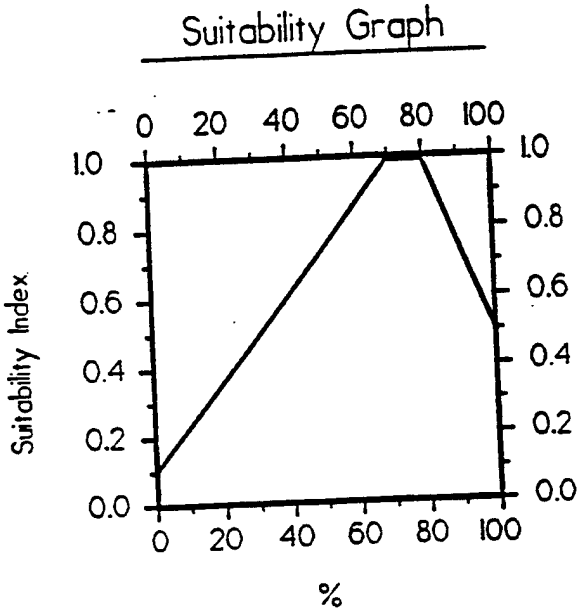
Instructions for Calculating SI for Variable 3:

1. Refer to Attachment 5 for examples of the different interspersion classes (=types).

2. Estimate percent of project area in each class and compute a weighted average to arrive at SIV_3. If the entire project area is solid marsh, assign an interspersion class #1 (SI=1.0). Conversely, if the entire project area is open water, assign an interspersion class #5 (SI=0.1).

SALINE MARSH

Variable V_4 Percent of open water area ≤ 1.5 feet deep, in relation to marsh surface.



Line Formulas

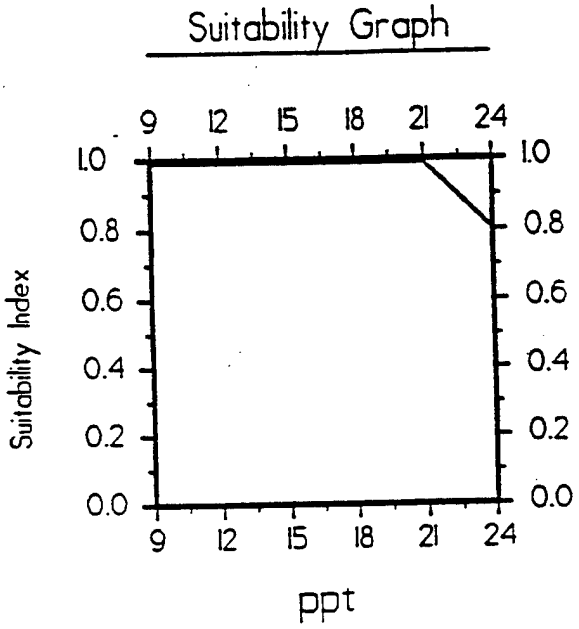
If 0 ≤ % < 70, then SI = (0.01286 * %) + 0.1

If 70 ≤ % < 80, then SI = 1.0

If % ≥ 80, then SI = (-0.025 * %) + 3.0

SALINE MARSH

Variable V_5 Average annual salinity.

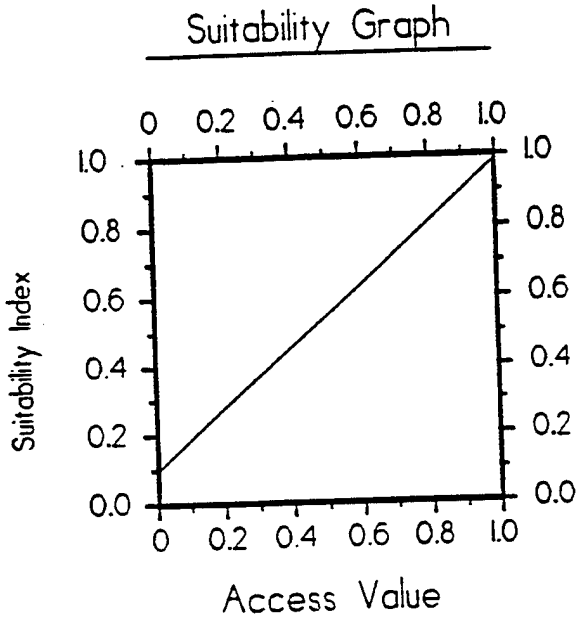


Line Formulas

If 9 ≤ ppt < 21, then SI = 1.0

If ppt ≥ 21, then SI = (-0.067 * ppt) + 2.4

Variable V_6 Aquatic organism access.



Line Formula

SI = (0.9 * Access Value) + 0.1

Note: Access Value = P * R, where "P" = percentage of wetland area considered accessible by estuarine organisms during normal tidal fluctuations, and "R" = Structure Rating.

Refer to Attachment 6 "Procedure For Calculating Access Value" for complete information on calculating "P" and "R" values.

Revised August 6, 1992

WETLAND VALUE ASSESSMENT COMMUNITY MODEL

Cypress-Tupelo Swamp

Water Depth and Duration:

Variable V_1 Water regime.

Water Quality:

Variable V_2 Water flow/exchange.

Variable V_3 Average high salinity.

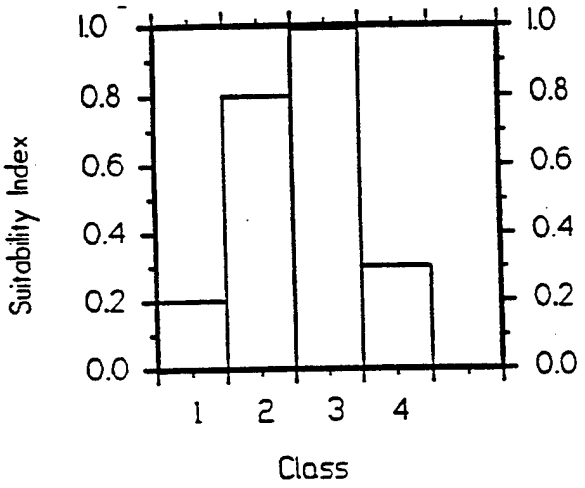
HSI Calculation:

$$HSI = (SI_{V_1} \times SI_{V_2} \times SI_{V_3})^{1/3}$$

CYPRESS-TUPELO SWAMP

Variable V_1 Water regime.

Suitability Graph



1 - Permanently Flooded: water covers the substrate throughout the year in all years.

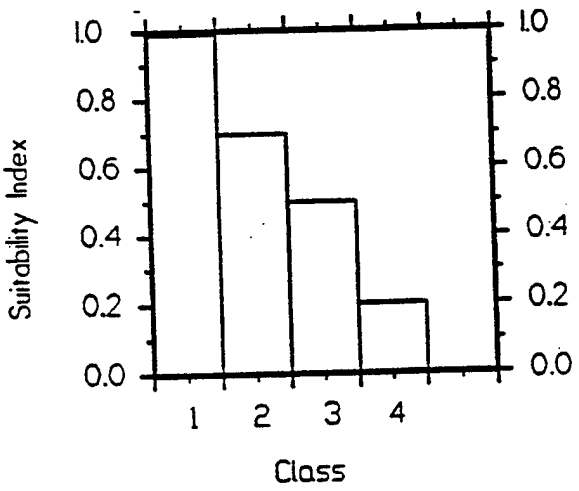
2 - Semipermanently Flooded: surface water is present throughout the growing season in most years.

3 - Seasonally Flooded: surface water is present for extended periods, especially in the growing season, but is absent by the end of the growing season in most years.

4 - Temporarily Flooded: surface water is present for brief periods during the growing season, but the water table usually lies well below the surface for most of the season.

Variable V_2 Water flow/exchange.

Suitability Graph



1 - Receives abundant and consistent riverine input and through-flow.

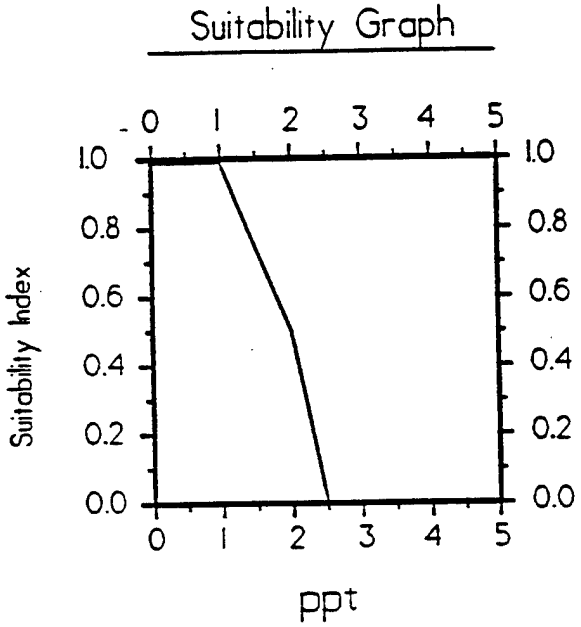
2 - Moderate water exchange, through riverine and/or tidal input.

3 - Limited water exchange, through riverine and/or tidal input.

4 - No water exchange (stagnant, impounded).

CYPRESS-TUPELO SWAMP

Variable V_3 Average high salinity.



Line Formulas

If $0 \leq ppt < 1$, then $SI = 1.0$

If $1 \leq ppt < 2$, then $SI = (-0.5 * ppt) + 1.5$

If $2 \leq ppt < 2.5$, then $SI = (-1.0 * ppt) + 2.5$

If $ppt \geq 2.5$, then $SI = 0$

Average high salinity is defined as the average of the upper 33 percent of salinity readings taken during the period of record.

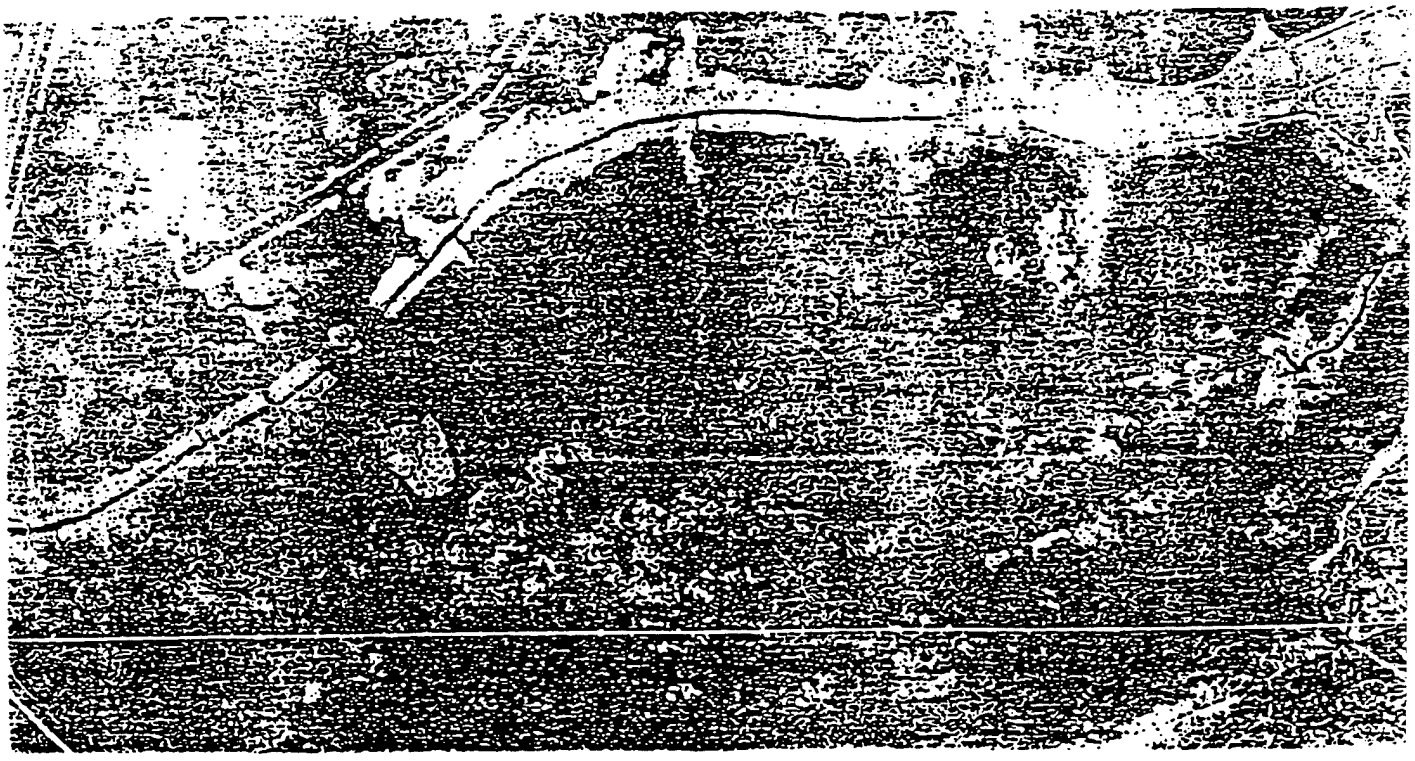
Variable 3-Marsh Interspersion Type 1
Scale 1" = 2000'

Attachment 5

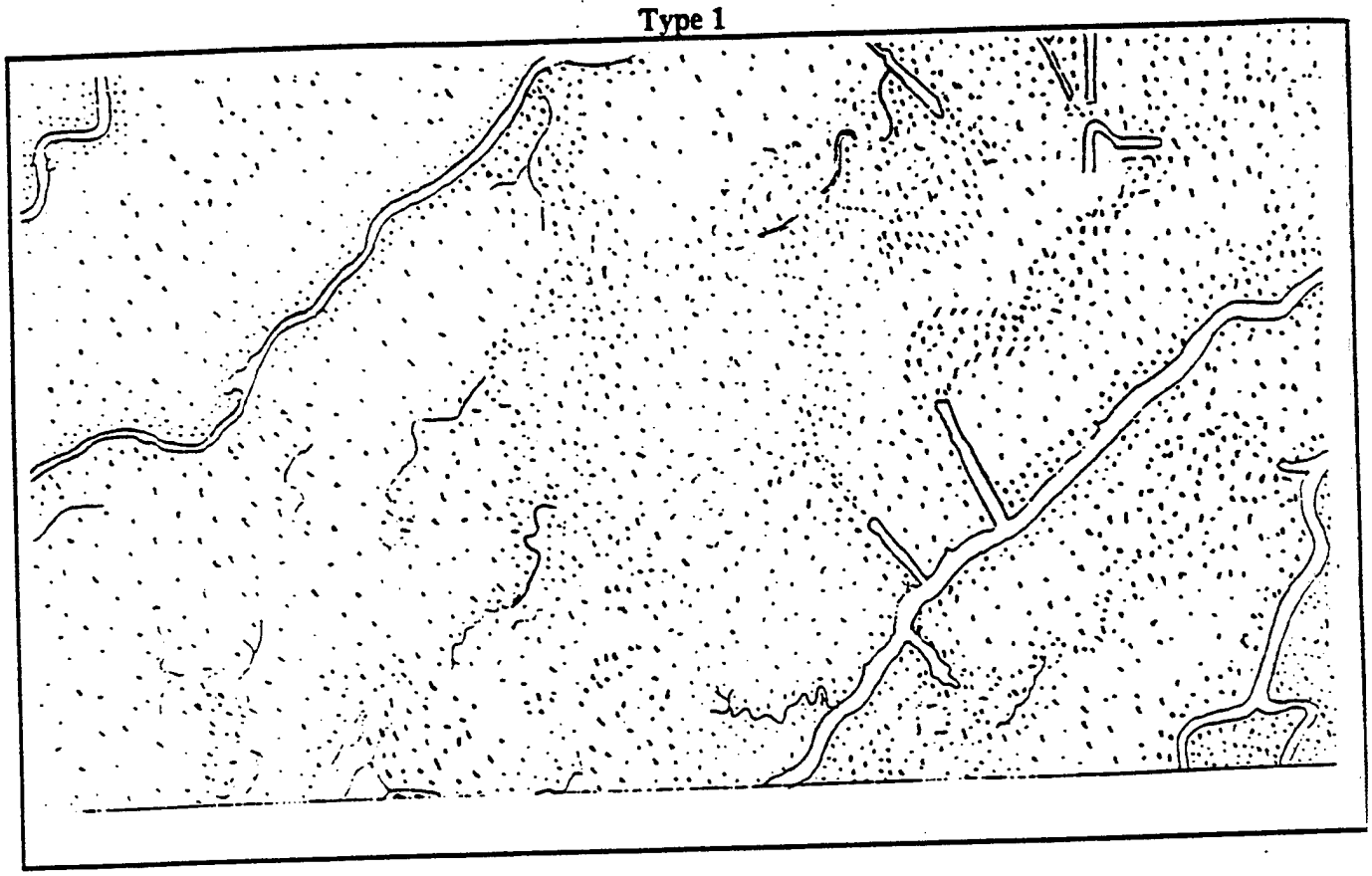
Variable 3 - Marsh Interspersion Type 2
Scale 1" = 2000'

Variable 3 - Marsh Interspersion Type 3
Scale 1" = 2000'

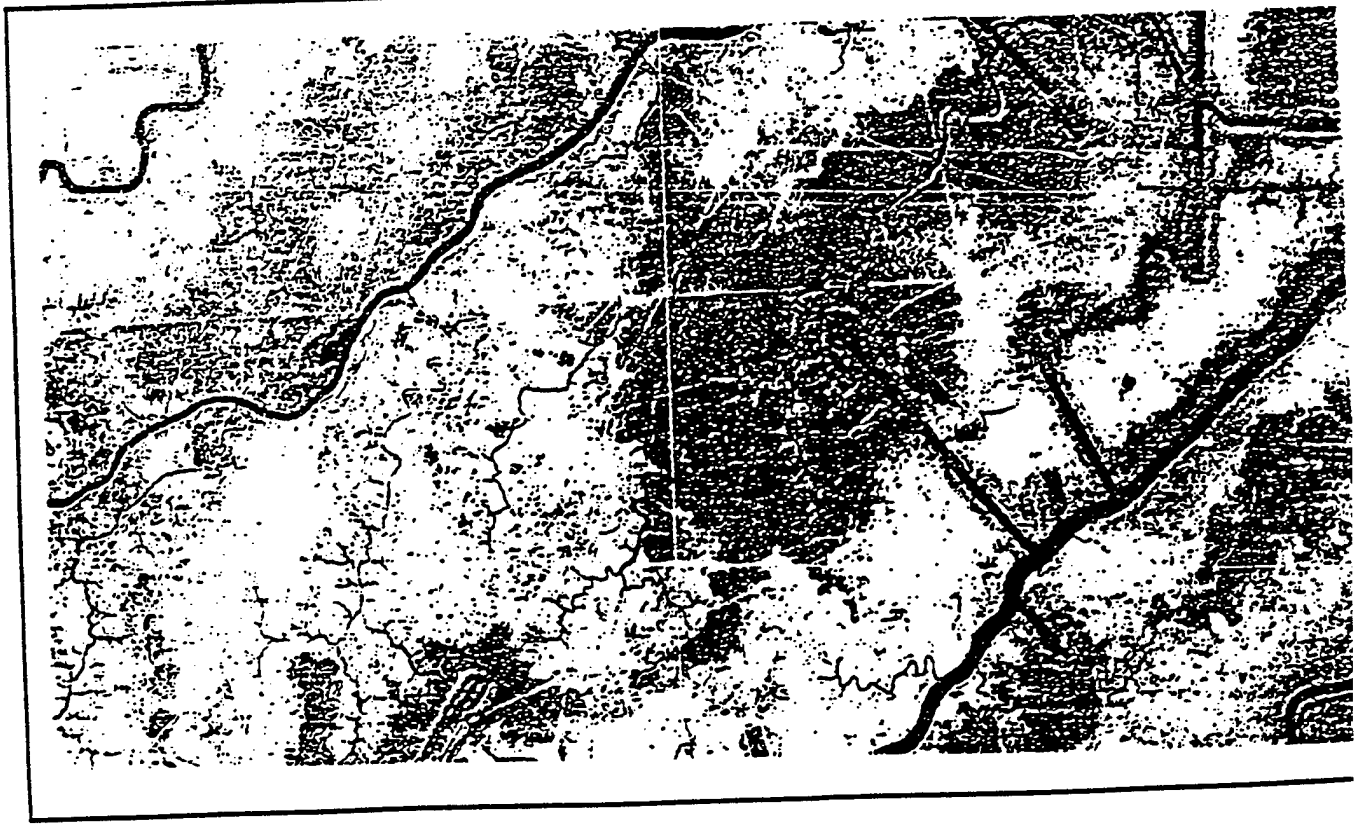
Variable 3 - Marsh Interspersion Type 4
Scale 1" = 2000'



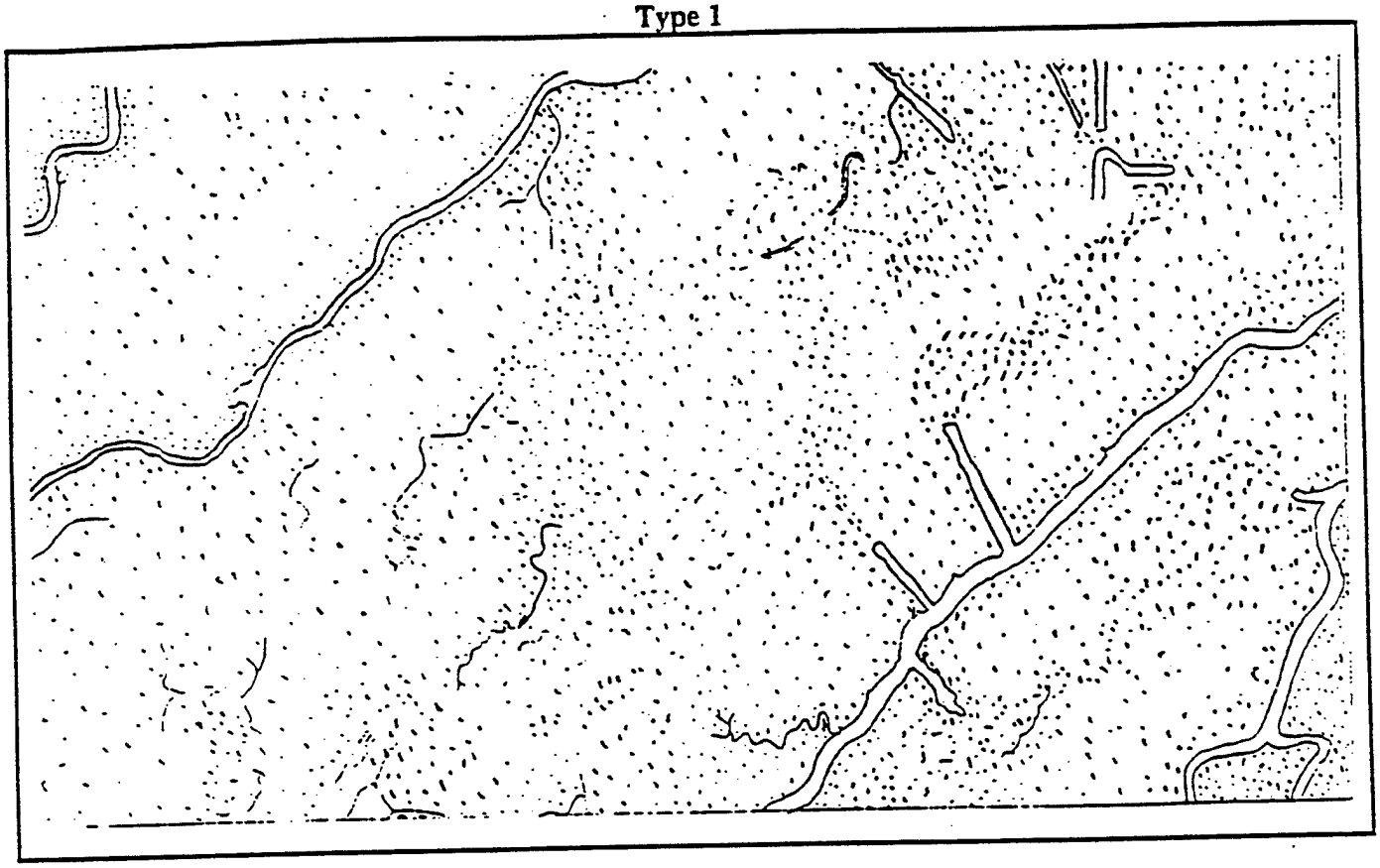
V3 Marsh Interspersion
Type 1



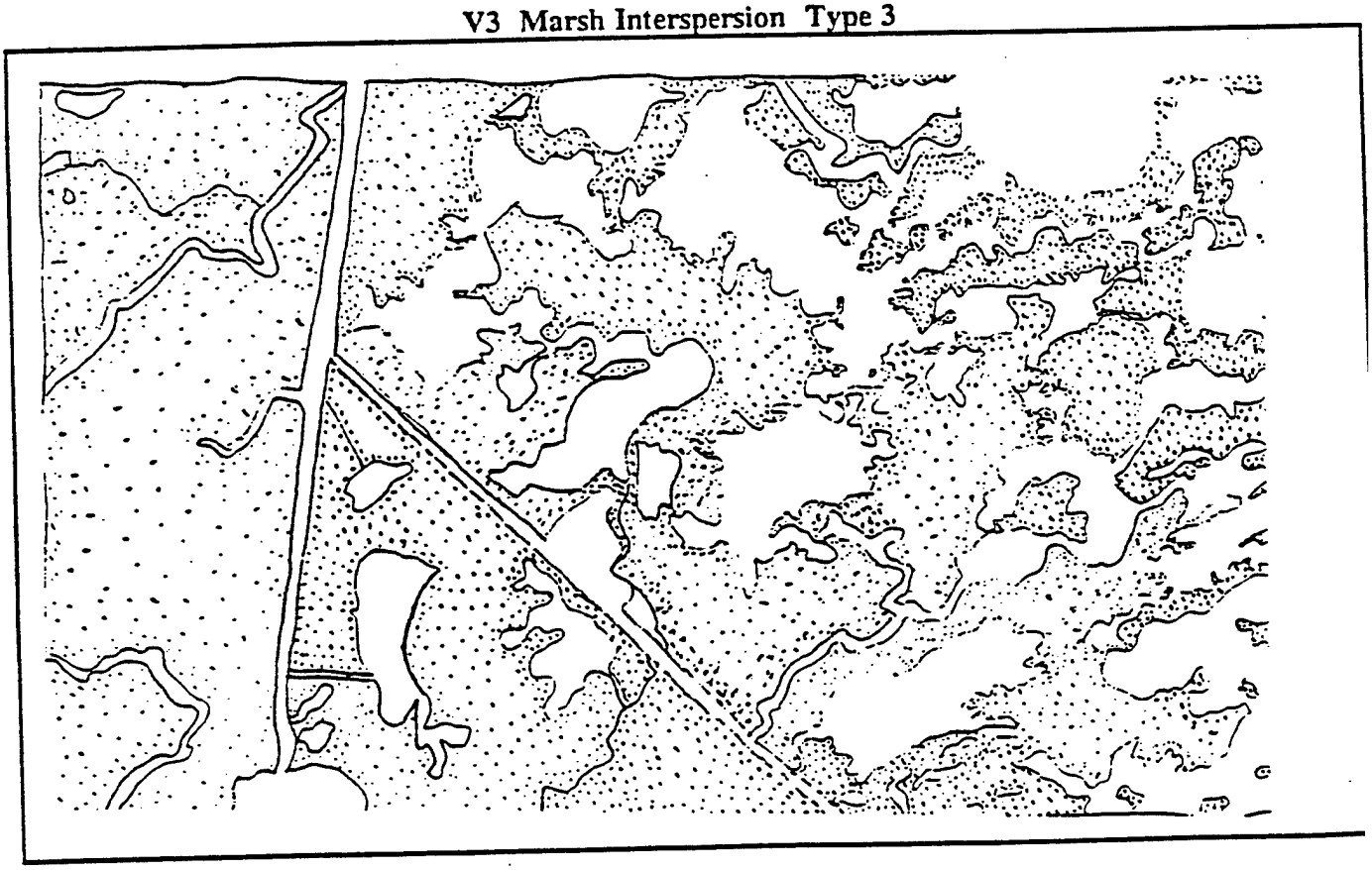
V3 Marsh Interspersion Type 1



V3 Marsh Interspersion
Type 1



V3 Marsh Interspersion Type 3



Revised June 2, 1993

PROCEDURE FOR CALCULATING ACCESS VALUE

1. Determine the percent of wetland area accessible by estuarine organisms during normal tidal fluctuations (P) for baseline (TY0) conditions. P may be determined by examination of aerial photography, knowledge of field conditions, or other appropriate methods.

2. Determine the Structure Rating (R) for each project structure as follows:

Structure Type	Rating
open system	1.0
rock weir set at 1ft BML[1], w/ boat bay	0.8
rock weir with boat bay	0.6
rock weir set at ≥ 1ft BML	0.6
slotted weir with boat bay	0.6
open culverts	0.5
weir with boat bay	0.5
weir set at ≥1ft BML	0.5
slotted weir	0.4
flapgated culvert with slotted weir	0.35
variable crest weir	0.3
flapgated variable crest weir	0.25
flapgated culvert	0.2
rock weir	0.15
fixed crest weir	0.1
solid plug	0.0001

For each structure type, the rating listed above pertains only to the standard structure configuration and assumes that the structure is operated according to common operating schedules consistent with the purpose for which that structure is designed. In the case of a "hybrid" structure or a unique application of one of the above-listed types (including unique or "non-standard" operational schemes), the WVA analyst(s) may assign an appropriate Structure Rating between 0.0001 and 1.0 that most closely approximates the relative degree to which the structure in question would allow ingress/egress of estuarine organisms. In those cases, the rational used in developing the new Structure Rating shall be documented.

3. Determine the Access Value. Where multiple openings equally affect a common "accessible unit", the Structure Rating (R) of

[1] Below Marsh Level

the structure proposed for the "major" access point for the unit will be used to calculate Access Value. The designation of "major" will be made by the Environmental Work Group. An "accessible unit" is a defined as a portion of the total accessible area that is served by one or more access routes (canals, bayous, etc.), yet is isolated in terms of estuarine organism access to or from other units of the project area. Isolation factors include physical barriers that prohibit further movement of estuarine organisms, such as natural levee ridges, and spoil banks; and dense marsh that lacks channels, trenasses, and similar small connections that would, if present, provide access and intertidal refugia for estuarine organisms.

Access Value should be calculated according to the following examples (Note: for all examples, P for TY0 = 90%. That designation is arbitrary and is used only for illustrative purposes; P could be any percentage from 0% to 100%):

a. One opening into area; no structure.

Access Value = P
= .90

b. One opening into area that provides access to the entire 90% of the project area deemed accessible. A flapgated culvert with slotted weir is placed across the opening.

Access Value = P * R
= .90 * .6
= .54

c. Two openings into area, each capable by itself of providing full access to the 90% of the project area deemed accessible in TY0. Opening #2 is determined to be the major access route relative to opening #1. A flapgated culvert with slotted weir is placed across opening #1. Opening #2 is left unaltered.

Access Value = P
= .90

Note: Structure #1 had no bearing on the Access Value calculation because its presence did not reduce access (opening #2 was determined to be the major access route, and access through that route was not altered).

d. Two openings into area. Opening #1 provides access to an

accessible unit comprising 30% of the area. Opening #2 provides access to an accessible unit comprising the remaining 60% of the project area. A flapgated culvert with slotted weir is placed across #1. Opening #2 is left open.

Access Value = weighted avg. of Access Values of the two accessible units

$$= ([P_1*R_1] + [P_2*R_2])/(P_1+P_2)$$
$$= ([.30*0.6] + [.60*1.0])/(.30+.60)$$
$$= (.18 + .60)/.90$$
$$= .78/.90$$
$$= .87$$

Note: $P_1 + P_2 = .90$, because only 90 percent of the study area was determined to be accessible at TY0.

e. Three openings into area, each capable of providing full access to the entire area independent of the others. Opening #3 is determined to be the major access route relative to openings #1 and #2. Opening #1 is blocked with a solid plug. Opening #2 is fitted with a flapgated culvert with slotted weir, and opening #3 is left open.

Access Value = P
= .90

Note: Structures #1 and #2 had no bearing on the Access Value calculation because their presence did not reduce access (opening #3 was determined to be the major access route, and access through that route was not altered).

f. Three openings into area, each capable of providing full access to the entire area independent of the others. Opening #2 is determined to be the major access route relative to openings #1 and #3. Opening #1 is blocked with a solid plug. Opening #2 is fitted with a flapgated culvert with slotted weir, and opening #3 is fitted with a fixed crest weir.

Access Value = $P * R_2$
= .90 * .6
= .54

Note: Structures #1 and #3 had no bearing on the Access Value calculation because their presence did not reduce access. Opening #2 was determined beforehand to be the major access route; thus, it was the flapgated culvert with slotted weir across that opening that actually served to limit access.

g. Three openings into area. Opening #1 provides access to an accessible unit comprising 20% of the area. Openings #2 and #3 provide access to an accessible unit comprising the remaining 70% of the area, and within that area, each is capable by itself of providing full access. However, opening #3 is determined to be the major access route relative to opening #2. Opening #1 is fitted with an open culvert, #2 with a flapgated culvert with slotted weir, and #3 with a fixed crest weir.

$$\text{Access Value} = ([P_1*R_1] + [P_2*R_3])/(P_1+P_2)$$

$$= ([.20*.7]+[.70*.6])/(.20+.70)$$
$$= (.14 + .42)/.90$$
$$= .56/.90$$
$$= .62$$

h. Three openings into area. Opening #1 provides access to an accessible unit comprising 20% of the area. Opening #2 provides access to an accessible unit comprising 40% of the area, and opening #3 provides access to the remaining 30% of the area. Opening #1 is fitted with an open culvert, #2 a flapgated culvert with slotted weir, and #3 a fixed crest weir.

$$\text{Access Value} = ([P_1*R_1]+[P_2*R_2]+[P_3*R_3])/(P_1+P_2+P_3)$$

$$= ([.20*.7]+[.40*.6]+[.30*.1])/(.20+.40+.30)$$
$$= (.14+.24+.03)/.90$$
$$= .41/.90$$
$$= .46$$

Published Habitat Suitability Index (HSI) Models Consulted for Variables for Possible Use in the Wetland Value Assessment Models

Estuarine Fish and Shellfish

pink shrimp
white shrimp
brown shrimp
spotted seatrout
Gulf flounder
southern flounder
Gulf menhaden
juvenile spot
juvenile Atlantic croaker
red drum

Reptiles and Amphibians

American alligator
slider turtle
bullfrog

Mammals

mink
muskrat

Freshwater Fish

channel catfish
largemouth bass
red ear sunfish
bluegill

Birds

clapper rail
great egret
northern pintail
mottled duck
coot
marsh wren
great blue heron
laughing gull
snow goose
red-winged blackbird
roseate spoonbill
white-fronted goose

Attachment 7

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COMMUNITY HABITAT SUITABILITY MODEL
BOTTOMLAND HARDWOOD FOREST

APPLICANT:
SITE: Estelle

DATE: 07-10-96
MODEL: BLH

TARGET YEAR		TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/val	SI	Class/val	SI	Class/val	SI	Class/val	SI	Class/val	SI
V1	Species Assoc	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	4	0.8	4	0.8	4	0.8
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	Input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		14	0.6	14	0.6	15	0.667	15	0.667	18	0.868
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	30		30		30		30		30	
		%Midstor	1	%Midstor	1	%Midstor	1	%Midstor	1	%Midstor	1
		40		40		50		40		30	
V4	Hydrology	Class		Class		Class		Class		Class	
		1	0.1	1	0.1	1	0.1	1	0.1	1	0.1
V5	Forest Size	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	4	0.8	4	0.8	4	0.8
V6	Surrounding										
	Land Use	%		%		%		%		%	
	a) Forest/Marsh	90		90		85		80		75	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	5	0.92	5	0.92	5	0.87	5	0.82	5	0.77
	d) Active Ag	0		0		0		0		0	
	e) Development	5		5		10		15		20	
V7	Disturbance										
	Type	Class	2	Class	2	Class	2	Class	2	Class	2
	Distance	Class	2	Class	2	Class	2	Class	2	Class	2
		SI	0.5	SI	0.5	SI	0.5	SI	0.5	SI	0.5
HSI (Case 1)			0.39529		0.39529		0.41388		0.41083		0.46499
HSI (Case 2)			0.56588		0.56588		0.57991		0.57763		0.61707
HSI (Case 3)			0.51842		0.51842		0.53326		0.53086		0.5729

With Proposed Project

TARGET YEAR		TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/val	SI	Class/val	SI	Class/val	SI	Class/val	SI	Class/val	SI
V1	Species Assoc	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	1	0.1	1	0.1	1	0.1
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		14	0.6	14	0.6	12	0.4	14	0.6	16	0.734
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	30		30		0		0		0	
		%Midstor	1	%Midstor	1	%Midstor	0.325	%Midstor	0.325	%Midstor	0.325
		40		40		10		10		10	
V4	Hydrology	Class		Class		Class		Class		Class	
		1	0.1	1	0.1	1	0.1	1	0.1	1	0.1
V5	Forest Size	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	1	0.2	1	0.2	1	0.2
V6	Surrounding										
	Land Use	%		%		%		%		%	
	a) Forest/Marsh	90		90		80		70		65	
	b) Abandoned Ag	0		0		0		5		5	
	c) Pasture/hay	5	0.92	5	0.92	5	0.82	0	0.73	0	0.68
	d) Active Ag	0		0		0		0		0	
	e) Development	5		5		15		25		30	
V7	Disturbance										
	Type	Class	2	Class	2	Class	2	Class	2	Class	2
	Distance	Class	2	Class	2	Class	1	Class	1	Class	1
		SI	0.5	SI	0.5	SI	0.25	SI	0.25	SI	0.25
HSI (Case 1)			0.39529		0.39529		0.29316		0.35389		0.38796
HSI (Case 2)			0.56588		0.56588		0.2175		0.24046		0.25254
HSI (Case 3)			0.51842		0.51842		0.20447		0.22957		0.24293

Case 1 - If Age <7 (or DBH< 5) then:
HSI = (SIv2 ^4 x SIv4^2 x SIv6 x SIv7)^1/6

Case 2 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv3^2 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/15

Case 3 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is not available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/13

Habitat Evaluation Procedures
Wit Future Without Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	292	0.56588	165.236	0
1	292	0.56588	165.236	165.236
10	292	0.57991	169.335	1505.57
25	292	0.57763	168.668	2535.02
50	292	0.61707	180.184	4360.64
		CUMULATIVE HSI		8566.46
		AAHU		171.329

Habitat Evaluation Procedures
Future With Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	292	0.56588	165.236	0
1	292	0.56588	165.236	165.236
10	50	0.2175	10.8749	686.035
25	50	0.24046	12.0231	171.735
50	50	0.25254	12.6272	308.129
		CUMULATIVE HSI		1311.14
		AAHU		26.2227

AAHU's Lost (-) / Gained (+) as a result of project -145.11

COMMUNITY HABITAT SUITABILITY MODEL
BOTTOMLAND HARDWOOD FOREST

APPLICANT:
SITE: East Group Properties

DATE: 07-10-95
MODEL: BLH

TARGET YEAR		TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI
V1	Species Assoc	Class 4	0.8	Class 4	0.8	Class 4	0.8	Class 4	0.8	Class 4	0.8
V2	Maturity input age or DBH	AGE 0	0	AGE 0	0	AGE 0	0	AGE 0	0	AGE 0	0
		DBH 14	0.6	DBH 14	0.6	DBH 15	0.667	DBH 15	0.667	DBH 18	0.868
V3	Understory/ Midstory	%Understory 30		%Understory 30		%Understory 30		%Understory 30		%Understory 30	
		%Midstor 40	1	%Midstor 40	1	%Midstor 50	1	%Midstor 40	1	%Midstor 30	1
V4	Hydrology	Class 1	0.1	Class 1	0.1	Class 1	0.1	Class 1	0.1	Class 1	0.1
V5	Forest Size	Class 4	0.8	Class 4	0.8	Class 4	0.8	Class 4	0.8	Class 4	0.8
V6	Surrounding Land Use	%		%		%		%		%	
	a) Forest/Marsh	98		98		95		90		85	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	0	0.98	0	0.98	0	0.95	5	0.92	0	0.85
	d) Active Ag	0		0		0		0		0	
	e) Development	2		2		5		10		15	
V7	Disturbance										
	Type	Class	3	Class	3	Class	3	Class	3	Class	3
	Distance	Class	2	Class	2	Class	2	Class	2	Class	2
		SI	1	SI	1	SI	1	SI	1	SI	1
HSI (Case 1)			0.43449		0.43449		0.45533		0.4545		0.51338
HSI (Case 2)			0.59514		0.59514		0.61091		0.60961		0.65052
HSI (Case 3)			0.54947		0.54947		0.56531		0.56491		0.60666

With Proposed Project

TARGET YEAR		TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI
V1	Species Assoc	Class 4	0.8	Class 4	0.8	Class 1	0.1	Class 1	0.1	Class 1	0.1
V2	Maturity input age or DBH	AGE 0	0	AGE 0	0	AGE 0	0	AGE 0	0	AGE 0	0
		DBH 14	0.6	DBH 14	0.6	DBH 12	0.4	DBH 14	0.6	DBH 16	0.734
V3	Understory/ Midstory	%Understory 30		%Understory 30		%Understory 0		%Understory 0		%Understory 0	
		%Midstor 40	1	%Midstor 40	1	%Midstor 10	0.325	%Midstor 10	0.325	%Midstor 10	0.325
V4	Hydrology	Class 1	0.1	Class 1	0.1	Class 1	0.1	Class 1	0.1	Class 1	0.1
V5	Forest Size	Class 4	0.8	Class 4	0.8	Class 1	0.2	Class 1	0.2	Class 1	0.2
V6	Surrounding Land Use	%		%		%		%		%	
	a) Forest/Marsh	98		98		90		85		80	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	0	0.98	0	0.98	0	0.9	0	0.85	0	0.8
	d) Active Ag	0		0		0		0		0	
	e) Development	2		2		10		15		20	
V7	Disturbance										
	Type	Class	2	Class	2	Class	2	Class	2	Class	2
	Distance	Class	2	Class	2	Class	1	Class	1	Class	1
		SI	0.5	SI	0.5	SI	0.26	SI	0.26	SI	0.26
HSI (Case 1)			0.39843		0.39843		0.29661		0.38058		0.39592
HSI (Case 2)			0.56826		0.56826		0.21685		0.24291		0.2553
HSI (Case 3)			0.52094		0.52094		0.20593		0.23227		0.24599

Case 1 - If Age <7 (or DBH< 5) then:
HSI = (SIv2 ^4 x SIv4^2 x SIv6 x SIv7)^1/8

Case 2 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv3^2 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/15

Case 3 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is not available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/13

Habitat Evaluation Procedures
Future Without Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	450	0.59514	267.813	0
1	450	0.59514	267.813	267.813
10	450	0.61091	274.91	2442.25
25	450	0.60961	274.323	4119.25
50	450	0.65052	292.736	7088.23
		CUMULATIVE HSI		13917.5
		AAHU		278.351

Habitat Evaluation Procedures
Future With Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	450	0.56826	255.719	0
1	450	0.56826	255.719	255.719
10	50	0.21685	10.9426	990.329
25	50	0.24291	12.1457	173.162
50	50	0.2553	12.7648	311.381
		CUMULATIVE HSI		1730.59
		AAHU		34.6118

AAHU's Lost (-) / Gained (+) as a result of project -243.74

COMMUNITY HABITAT SUITIBILITY MODEL
BOTTOMLAND HARDWOOD FOREST

APPLICANT:
SITE: Marrero

DATE: 7-10-95
MODEL: BLH

TARGET YEAR		TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI
V1	Species Assoc	Class 4	0.8	Class 4	0.8	Class 4	0.8	Class 4	0.8	Class 4	0.8
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		9	0.167	9	0.167	11	0.3	15	0.667	18	0.868
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	30		30		30		30		30	
		%Midstor	0.95	%Midstor	0.95	%Midstor	1	%Midstor	1	%Midstor	1
		60		60		50		40		30	
V4	Hydrology	Class		Class		Class		Class		Class	
		1	0.1	1	0.1	1	0.1	1	0.1	1	0.1
V5	Forest Size	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	4	0.8	4	0.8	4	0.8
V6	Surrounding										
	Land Use	%		%		%		%		%	
	a) Forest/Marsh	55		55		50		45		40	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	5	0.57	5	0.57	5	0.52	5	0.47	5	0.42
	d) Active Ag	0		0		0		0		0	
	e) Development	40		40		45		45		45	
V7	Disturbance										
	Type	Class	2	Class	2	Class	2	Class	2	Class	2
	Distance	Class	2	Class	2	Class	2	Class	1	Class	1
		SI	0.5	SI	0.5	SI	0.5	SI	0.26	SI	0.26
HSI (Case 1)			0.19643		0.19643		0.26027		0.35314		0.39723
HSI (Case 2)			0.38706		0.38706		0.45282		0.53285		0.56735
HSI (Case 3)			0.33712		0.33712		0.40086		0.48386		0.51997

With Proposed Project

TARGET YEAR		TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI
V1	Species Assoc	Class 4	0.8	Class 4	0.8	Class 1	0.1	Class 1	0.1	Class 1	0.1
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		9	0.167	9	0.167	11	0.3	15	0.667	18	0.868
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	30	0	30		0		0		0	
		%Midstor	0.95	%Midstor	0.95	%Midstor	0.325	%Midstor	0.325	%Midstor	0.325
		60		60		10		10		10	
V4	Hydrology	Class		Class		Class		Class		Class	
		1	0.1	1	0.1	1	0.1	1	0.1	1	0.1
V5	Forest Size	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	1	0.2	1	0.2	1	0.2
V6	Surrounding										
	Land Use	%		%		%		%		%	
	a) Forest/Marsh	55		55		45		40		35	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	5	0.57	5	0.57	0	0.45	0	0.4	0	0.35
	d) Active Ag	0		0		0		0		0	
	e) Development	40		40		55		60		65	
V7	Disturbance										
	Type	Class	2	Class	2	Class	2	Class	2	Class	2
	Distance	Class	2	Class	2	Class	1	Class	1	Class	1
		SI	0.5	SI	0.5	SI	0.26	SI	0.26	SI	0.26
HSI (Case 1)			0.19643		0.19643		0.23555		0.34609		0.38628
HSI (Case 2)			0.38706		0.38706		0.19354		0.23762		0.25265
HSI (Case 3)			0.33712		0.33712		0.1787		0.22645		0.24305

Case 1 - If Age <7 (or DBH< 5) then:
HSI = (SIv2 ^4 x SIv4^2 x SIv6 x SIv7)^1/8

Case 2 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv3^2 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/15

Case 3 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is not available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/13

Habitat Evaluation Procedures
Future Without Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	320	0.38706	123.858	0
1	320	0.38706	123.858	123.858
10	320	0.45282	144.903	1209.42
25	320	0.53285	170.511	2365.6
50	320	0.56735	181.552	4400.78
		CUMULATIVE HSI		8099.66
		AAHU		161.993

Habitat Evaluation Procedures
Future With Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	320	0.38706	123.858	0
1	320	0.38706	123.858	123.858
5	50	0.19354	9.67686	232.236
25	50	0.23762	11.8812	215.58
50	50	0.25265	12.6327	306.434
		CUMULATIVE HSI		878.098
		AAHU		17.562

AAHU's Lost (-) / Gained (+) as a result of project -144.43

COMMUNITY HABITAT SUITABILITY MODEL
BOTTOMLAND HARDWOOD FOREST

APPLICANT:
SITE: Landco

DATE: 7-10-95
MODEL: BLH

	TARGET YEAR	TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/val	SI	Class/val	SI	Class/val	SI	Class/val	SI	Class/val	SI
V1	Species Assoc	Class 4	0.8	Class 4	0.8	Class 4	0.8	Class 4	0.8	Class 4	0.8
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		16	0.734	16	0.734	18	0.868	20	1	20	1
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	30		30		30		30		30	
		%Midstor	1	%Midstor	1	%Midstor	1	%Midstor	1	%Midstor	1
		35		35		35		35		35	
V4	Hydrology	Class		Class		Class		Class		Class	
		1	0.1	1	0.1	1	0.1	1	0.1	1	0.1
V5	Forest Size	Class		Class		Class		Class		Class	
		5	1	5	1	5	1	5	1	5	1
V6	Surrounding Land Use	%		%		%		%		%	
	a) Forest/Marsh	75		75		70		65		60	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	5	0.77	5	0.77	5	0.72	5	0.67	5	0.62
	d) Active Ag	0		0		0		0		0	
	e) Development	20		20		25		30		35	
V7	Disturbance										
	Type	Class	3	Class	3	Class	3	Class	3	Class	3
	Distance	Class	2	Class	2	Class	2	Class	2	Class	2
		SI	1	SI	1	SI	1	SI	1	SI	1
HSI (Case 1)			0.46629		0.46629		0.50284		0.53488		0.52972
HSI (Case 2)			0.62725		0.62725		0.65301		0.67488		0.6714
HSI (Case 3)			0.58382		0.58382		0.61157		0.63527		0.63149

With Proposed Project

	TARGET YEAR	TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/val	SI	Class/val	SI	Class/val	SI	Class/val	SI	Class/val	SI
V1	Species Assoc	Class 4	0.8	Class 4	0.8	Class 1	0.1	Class 1	0.1	Class 1	0.1
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		16	0.734	16	0.734	16	0.734	18	0.868	20	1
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	30	0	30		10		10		10	
		%Midstor	1	%Midstor	1	%Midstor	0.7	%Midstor	0.7	%Midstor	0.7
		35		35		20		20		20	
V4	Hydrology	Class		Class		Class		Class		Class	
		1	0.1	1	0.1	1	0.1	1	0.1	1	0.1
V5	Forest Size	Class		Class		Class		Class		Class	
		5	1	5	1	1	0.2	1	0.2	1	0.2
V6	Surrounding Land Use	%		%		%		%		%	
	a) Forest/Marsh	75		75		70		65		60	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	5	0.77	5	0.77	5	0.72	5	0.67	5	0.62
	d) Active Ag	0		0		0		0		0	
	e) Development	20		20		25		30		35	
V7	Disturbance										
	Type	Class	2	Class	2	Class	2	Class	2	Class	2
	Distance	Class	2	Class	2	Class	1	Class	1	Class	1
		SI	0.5	SI	0.5	SI	0.26	SI	0.26	SI	0.26
HSI (Case 1)			0.42759		0.42759		0.39074		0.42111		0.44763
HSI (Case 2)			0.59893		0.59893		0.28082		0.29225		0.30193
HSI (Case 3)			0.55351		0.55351		0.244		0.2555		0.26529

Case 1 - If Age <7 (or DBH< 5) then:
HSI = (SIv2 ^4 x SIv4^2 x SIv6 x SIv7)^1/8

Case 2 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv3^2 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/15

Case 3 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is not available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/13

Habitat Evaluation Procedures
Future Without Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	808	0.62725	506.82	0
1	808	0.62725	506.82	506.82
10	808	0.65301	527.63	4655.02
25	808	0.67488	545.306	8047.02
50	808	0.6714	542.494	13597.5
		CUMULATIVE HSI		26806.4
		AAHU		536.127

Habitat Evaluation Procedures
Future With Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	808	0.59893	483.933	0
1	808	0.59893	483.933	483.933
10	208	0.28082	58.4096	2154.24
25	208	0.29225	60.7883	893.985
50	208	0.30193	62.8014	1544.87
		CUMULATIVE HSI		5077.03
		AAHU		101.541

AAHU's Lost (-) / Gained (+) as a result of project -434.59

COMMUNITY HABITAT SUITABILITY MODEL
BOTTOMLAND HARDWOOD FOREST

APPLICANT:
SITE: PP1

DATE: 7-10-95
MODEL: BLH

TARGET YEAR		TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI
V1	Species Assoc	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	4	0.8	4	0.8	4	0.8
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	Input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		16	0.734	16	0.734	18	0.868	20	1	20	1
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	30		30		30		30		30	
		%Midstor	1	%Midstor	1	%Midstor	1	%Midstor	1	%Midstor	1
		40		40		40		40		40	
V4	Hydrology	Class		Class		Class		Class		Class	
		2	0.5	2	0.5	2	0.5	2	0.5	2	0.5
V5	Forest Size	Class		Class		Class		Class		Class	
		5	1	5	1	5	1	5	1	5	1
V6	Surrounding Land Use	%		%		%		%		%	
	a) Forest/Marsh	85		85		80		75		70	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	5	0.87	5	0.87	5	0.82	5	0.77	5	0.72
	d) Active Ag	0		0		0		0		0	
	e) Development	10		10		15		20		25	
V7	Disturbance										
	Type	Class	2	Class	2	Class	2	Class	2	Class	2
	Distance	Class	2	Class	2	Class	2	Class	2	Class	2
		SI	0.5	SI	0.5	SI	0.5	SI	0.5	SI	0.5
HSI (Case 1)			0.64923		0.64923		0.70081		0.74632		0.74008
HSI (Case 2)			0.74835		0.74835		0.77949		0.80809		0.80249
HSI (Case 3)			0.71571		0.71571		0.75018		0.7798		0.77578

With Proposed Project

TARGET YEAR		TY = 0		TY = 1		TY = 10		TY = 25		TY = 50	
VARIABLE		Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI	Class/Val	SI
V1	Species Assoc	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	1	0.1	1	0.1	1	0.1
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	Input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		16	0.734	16	0.734	16	0.734	18	0.868	20	1
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	30	0	30		0		0		0	
		%Midstor	1	%Midstor	1	%Midstor	0.325	%Midstor	0.325	%Midstor	0.325
		40		40		10		10		10	
V4	Hydrology	Class		Class		Class		Class		Class	
		2	0.5	2	0.5	1	0.1	1	0.1	1	0.1
V5	Forest Size	Class		Class		Class		Class		Class	
		5	1	5	1	1	0.2	1	0.2	1	0.2
V6	Surrounding Land Use	%		%		%		%		%	
	a) Forest/Marsh	85		85		75		65		55	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	5	0.87	5	0.87	5	0.77	5	0.67	5	0.57
	d) Active Ag	0		0		0		0		0	
	e) Development	10		10		20		30		40	
V7	Disturbance										
	Type	Class	2	Class	2	Class	2	Class	2	Class	2
	Distance	Class	2	Class	2	Class	1	Class	1	Class	1
		SI	0.5	SI	0.5	SI	0.26	SI	0.26	SI	0.26
HSI (Case 1)			0.64923		0.64923		0.39403		0.42111		0.44295
HSI (Case 2)			0.74835		0.74835		0.25465		0.26383		0.27105
HSI (Case 3)			0.71571		0.71571		0.24527		0.2555		0.26358

Case 1 - If Age <7 (or DBH< 5) then:
HSI = (SIv2 ^4 x SIv4^2 x SIv6 x SIv7)^1/8

Case 2 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv3^2 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/15

Case 3 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is not available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/13

Habitat Evaluation Procedures
Future Without Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	609	0.74835	455.745	0
1	609	0.74835	455.745	455.745
10	609	0.77949	474.71	4187.05
25	609	0.80809	492.009	7242.14
50	609	0.80249	488.717	12245.3
		CUMULATIVE HSI		24130.3
		AAHU		482.605

Habitat Evaluation Procedures
Future With Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	609	0.74835	455.745	0
1	609	0.74835	455.745	455.745
10	50	0.25465	12.7323	1894.18
25	50	0.26383	13.1916	194.429
50	50	0.27105	13.5523	334.259
		CUMULATIVE HSI		2678.85
		AAHU		53.573

AAHU's Lost (-) / Gained (+) as a result of project -428.03

COMMUNITY HABITAT SUITIBILITY MODEL
BOTTOMLAND HARDWOOD FOREST

APPLICANT:
SITE: Bunge

DATE: 7-10-95
MODEL: BLH

VARIABLE	TARGET YEAR	TY = 0 Class/val	SI	TY = 1 Class/val	SI	TY = 10 Class/val	SI	TY = 25 Class/val	SI	TY = 50 Class/val	SI
V1	Species Assoc	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	4	0.8	4	0.8	4	0.8
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	Input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		11	0.3	11	0.3	13	0.5	16	0.734	19	0.935
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	80		80		75		65		55	
		%Midstor	0.9	%Midstor	0.9	%Midstor	0.925	%Midstor	0.975	%Midstor	1
		40		40		40		40		40	
V4	Hydrology	Class		Class		Class		Class		Class	
		3	1	3	1	3	1	3	1	3	1
V5	Forest Size	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	4	0.8	4	0.8	4	0.8
V6	Surrounding Land Use	%		%		%		%		%	
	a) Forest/Marsh	70		70		65		65		65	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	20	0.78	20	0.78	20	0.73	15	0.71	10	0.69
	d) Active Ag	0		0		0		0		0	
	e) Development	10		10		15		20		25	
V7	Disturbance										
	Type	Class	3	Class	3	Class	3	Class	3	Class	3
	Distance	Class	2	Class	2	Class	2	Class	2	Class	2
		SI	1	SI	1	SI	1	SI	1	SI	1
HSI (Case 1)		0.53097		0.53097		0.67983		0.82083		0.92313	
HSI (Case 2)		0.65308		0.65308		0.74782		0.83272		0.88955	
HSI (Case 3)		0.62164		0.62164		0.72375		0.81276		0.87367	

With Proposed Project

VARIABLE	TARGET YEAR	TY = 0 Class/val	SI	TY = 1 Class/val	SI	TY = 10 Class/val	SI	TY = 25 Class/val	SI	TY = 50 Class/val	SI
V1	Species Assoc	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	1	0.1	1	0.1	1	0.1
V2	Maturity	AGE		AGE		AGE		AGE		AGE	
	Input age or DBH	0	0	0	0	0	0	0	0	0	0
		DBH		DBH		DBH		DBH		DBH	
		11	0.3	11	0.3	13	0.5	16	0.734	19	0.935
V3	Understory/	%Understory		%Understory		%Understory		%Understory		%Understory	
	Midstory	80	0	80		0		0		0	
		%Midstor	0.9	%Midstor	0.9	%Midstor	0.325	%Midstor	0.325	%Midstor	0.325
		40		40		10		10		10	
V4	Hydrology	Class		Class		Class		Class		Class	
		3	1	3	1	2	0.5	2	0.5	2	0.5
V5	Forest Size	Class		Class		Class		Class		Class	
		4	0.8	4	0.8	1	0.2	1	0.2	1	0.2
V6	Surrounding Land Use	%		%		%		%		%	
	a) Forest/Marsh	70		70		60		55		50	
	b) Abandoned Ag	0		0		0		0		0	
	c) Pasture/hay	20	0.78	20	0.78	0	0.6	0	0.55	0	0.5
	d) Active Ag	0		0		0		0		0	
	e) Development	10		10		40		45		50	
V7	Disturbance										
	Type	Class	3	Class	3	Class	3	Class	3	Class	3
	Distance	Class	2	Class	2	Class	1	Class	1	Class	1
		SI	1	SI	1	SI	1	SI	1	SI	1
HSI (Case 1)		0.53097		0.53097		0.55782		0.66855		0.74562	
HSI (Case 2)		0.65308		0.65308		0.30651		0.33759		0.35782	
HSI (Case 3)		0.62164		0.62164		0.30377		0.33957		0.36315	

Case 1 - If Age <7 (or DBH< 5) then:
HSI = (SIv2 ^4 x SIv4^2 x SIv6 x SIv7)^1/8

Case 2 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv3^2 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/15

Case 3 - If Age >7 (or DBH >5) and V3 (Understory/Midstory) data is not available, then:
HSI = (SIv1^4 x SIv2 ^4 x SIv4^2 x SIv5 x SIv6 x SIv7)^1/13

Habitat Evaluation Procedures
Future Without Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	123	0.65308	80.3291	0
1	123	0.65308	80.3291	80.3291
10	123	0.74782	91.9816	775.398
25	123	0.83272	102.425	1458.05
50	123	0.88955	109.414	2647.99
		CUMULATIVE HSI		4961.77
		AAHU		99.2353

Habitat Evaluation Procedures
Future With Project

TARGET YEAR	ACREAG	HSI	HU	AVE HU
0	123	0.65308	80.3291	0
1	123	0.65308	80.3291	80.3291
10	25	0.30651	7.66287	345.018
25	25	0.33759	8.4398	120.77
50	25	0.35782	8.94548	217.316
		CUMULATIVE HSI		763.433
		AAHU		15.2687

AAHU's Lost (-) / Gained (+) as a result of project -83.967

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project..... Estelle-EPP

Marsh type acres:
Fresh.....
Intermediate..

Condition: Future With Project

Variable		TY 0 Value	SI	TY 1 Value	SI	TY 5 Value	SI			
V1	% Emergent	100	0.80	100	0.80	0	0.10			
V2	% Aquatic	100	0.50	100	0.50	0	0.10			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.39	HSI =	0.15			

Project..... Estelle-EPP
FWP

Variable		TY 10 Value	SI	TY 25 Value	SI	TY 50 Value	SI			
V1	% Emergent	0	0.10	0	0.10	0	0.10			
V2	% Aquatic	0	0.10	0	0.10	0	0.10			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.15	HSI =	0.15	HSI =	0.15			

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project..... Estelle-EPP

Condition: Future Without Project

Marsh type acres:
Fresh.....
Intermediate...

Variable		TY 0 Value	SI	TY 1 Value	SI	TY 5 Value	SI			
V1	% Emergent	100	0.80	100	0.80	100	0.80			
V2	% Aquatic	100	0.50	100	0.50	100	0.50			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.39	HSI =	0.39			

Project..... Estelle-EPP
FWOP

Variable		TY 10 Value	SI	TY 25 Value	SI	TY 50 Value	SI			
V1	% Emergent	100	0.80	90	0.90	80	1.00			
V2	% Aquatic	100	0.50	100	0.50	100	0.50			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.60	0	0.60	0	0	0
	Class 2	0		100		100		0	0.6	0.6
	Class 3	0		0		0		0	0	0
	Class 4	100		0		0		0.2	0	0
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.45	HSI =	0.46			

HU CALCULATION, Fresh/Int. Marsh
Project: Estelle-EPP

Future With Project

TY	Acres	x HSI	= HUs	INTERVAL LENGTH x (YRS)	INTERVAL = HUs
0	362	0.39			
1	362	0.39	140.36	1	140.36
5	0	0.15	0.00	4	0.00
10	0	0.15	0.00	5	0.00
25	0	0.15	0.00	15	0.00
50	0	0.15	0.00	25	0.00

Total HU's= 140.36

Future Without Project

TY	Acres	x HSI	= HUs	INTERVAL LENGTH x (YRS)	INTERVAL = HUs
0	362	0.39			
1	362	0.39	140.36	1	140.36
5	362	0.39	140.36	4	561.44
10	362	0.39	140.36	5	701.80
25	362	0.45	162.29	15	2434.41
50	362	0.46	167.51	25	4187.64

Total HU's= 8025.66

NET CHANGE IN HU'S DUE TO PROJECT

A. Future With Project Total HU's =	140.36
B. Future Without Project Total HU's =	8025.66
Net Change (FWP - FWOP) =	-7885.30

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project..... Estelle-EG

Marsh type acres:
Fresh.....
Intermediate..

Condition: Future With Project

Variable		TY 0 Value	SI	TY 1 Value	SI	TY 5 Value	SI			
V1	% Emergent	100	0.80	100	0.80	0	0.10			
V2	% Aquatic	100	0.50	100	0.50	0	0.10			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt)									
	fresh	1		1		1		1.00	1.00	1.00
	intermediate									
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.39	HSI =	0.15			

Project..... Estelle-EG
FWP

Variable		TY 10 Value	SI	TY 25 Value	SI	TY 50 Value	SI			
V1	% Emergent	0	0.10	0	0.10	0	0.10			
V2	% Aquatic	0	0.10	0	0.10	0	0.10			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt)									
	fresh	1		1		1		1.00	1.00	1.00
	intermediate									
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.15	HSI =	0.15	HSI =	0.15			

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project..... Estelle-EG

Condition: Future Without Project

Marsh type acres:
Fresh.....
Intermediate...

Variable		TY 0 Value	SI	TY 1 Value	SI	TY 5 Value	SI			
V1	% Emergent	100	0.80	100	0.80	100	0.80			
V2	% Aquatic	100	0.50	100	0.50	100	0.50			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt)									
	fresh	1		1		1		1.00	1.00	1.00
	intermediate									
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.39	HSI =	0.39			

Project..... Estelle-EG
FWOP

Variable		TY 10 Value	SI	TY 25 Value	SI	TY 50 Value	SI			
V1	% Emergent	100	0.80	90	0.90	80	1.00			
V2	% Aquatic	100	0.50	100	0.50	100	0.50			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.60	0	0.60	0	0	0
	Class 2	0		100		100		0	0.6	0.6
	Class 3	0		0		0		0	0	0
	Class 4	100		0		0		0.2	0	0
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt)									
	fresh	1		1		1		1.00	1.00	1.00
	intermediate									
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.45	HSI =	0.46			

HU CALCULATION, Fresh/Int. Marsh
Project: Estelle-EG

Future With Project TY	Acres	x HSI	= HUs	INTERVAL LENGTH x (YRS)	INTERVAL = HUs
0	171	0.39			
1	171	0.39	66.30	1	66.30
5	0	0.15	0.00	4	0.00
10	0	0.15	0.00	5	0.00
25	0	0.15	0.00	15	0.00
50	0	0.15	0.00	25	0.00

Total HU's= 66.30

Future Without Project TY	Acres	x HSI	= HUs	INTERVAL LENGTH x (YRS)	INTERVAL = HUs
0	171	0.39			
1	171	0.39	66.30	1	66.30
5	171	0.39	66.30	4	265.21
10	171	0.39	66.30	5	331.51
25	171	0.45	76.66	15	1149.96
50	171	0.46	79.13	25	1978.14

Total HU's= 3791.13

NET CHANGE IN HU'S DUE TO PROJECT

A. Future With Project Total HU's =	66.30
B. Future Without Project Total HU's =	3791.13
Net Change (FWP - FWOP) =	-3724.82

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project..... Estelle-MLC

Marsh type acres:
Fresh.....
Intermediate..

Condition: Future With Project

Variable		TY 0 Value	SI	TY 1 Value	SI	TY 5 Value	SI			
V1	% Emergent	10	0.25	10	0.25	0	0.10			
V2	% Aquatic	100	0.50	100	0.50	0	0.10			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.27	HSI =	0.27	HSI =	0.15			

Project..... Estelle-MLC
FWP

Variable		TY 10 Value	SI	TY 25 Value	SI	TY 50 Value	SI			
V1	% Emergent	0	0.10	0	0.10	0	0.10			
V2	% Aquatic	0	0.10	0	0.10	0	0.10			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.15	HSI =	0.15	HSI =	0.15			

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project..... Estelle-MLC

Condition: Future Without Project

Marsh type acres:
Fresh.....
Intermediate...

Variable		TY 0 Value	SI	TY 1 Value	SI	TY 5 Value	SI			
V1	% Emergent	10	0.25	10	0.25	10	0.25			
V2	% Aquatic	100	0.50	100	0.50	100	0.50			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.27	HSI =	0.27	HSI =	0.27			

Project..... Estelle-MLC
FWOP

Variable		TY 10 Value	SI	TY 25 Value	SI	TY 50 Value	SI			
V1	% Emergent	10	0.25	5	0.18	5	0.18			
V2	% Aquatic	100	0.50	100	0.50	100	0.50			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.60	0	0.60	0	0	0
	Class 2	0		100		100		0	0.6	0.6
	Class 3	0		0		0		0	0	0
	Class 4	100		0		0		0.2	0	0
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.27	HSI =	0.27	HSI =	0.27			

HU CALCULATION, Fresh/Int. Marsh
Project: Estelle-MLC

Future With Project

TY	Acres	x HSI	= HUs	INTERVAL LENGTH x (YRS)	INTERVAL = HUs
0	155	0.27			
1	155	0.27	42.40	1	42.40
5	0	0.15	0.00	4	0.00
10	0	0.15	0.00	5	0.00
25	0	0.15	0.00	15	0.00
50	0	0.15	0.00	25	0.00

Total HU's= 42.40

Future Without Project

TY	Acres	x HSI	= HUs	INTERVAL LENGTH x (YRS)	INTERVAL = HUs
0	155	0.27			
1	155	0.27	42.40	1	42.40
5	155	0.27	42.40	4	169.58
10	155	0.27	42.40	5	211.98
25	155	0.27	42.52	15	637.76
50	155	0.27	42.52	25	1062.93

Total HU's= 2124.64

NET CHANGE IN HU'S DUE TO PROJECT

A. Future With Project Total HU's =	42.40
B. Future Without Project Total HU's =	2124.64
Net Change (FWP - FWOP) =	-2082.25

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project..... Estelle-LCO

Condition: Future With Project

Marsh type acres:
Fresh.....
Intermediate..

Variable		TY 0 Value	SI	TY 1 Value	SI	TY 5 Value	SI			
V1	% Emergent	100	0.80	100	0.80	0	0.10			
V2	% Aquatic	100	0.50	100	0.50	0	0.10			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.39	HSI =	0.15			

Project..... Estelle-LCO
FWP

Variable		TY 10 Value	SI	TY 25 Value	SI	TY 50 Value	SI			
V1	% Emergent	0	0.10	0	0.10	0	0.10			
V2	% Aquatic	0	0.10	0	0.10	0	0.10			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.15	HSI =	0.15	HSI =	0.15			

WETLAND VALUE ASSESSMENT COMMUNITY MODEL
Fresh/Intermediate Marsh

Project..... Estelle-LCO

Marsh type acres:
Fresh.....
Intermediate...

Condition: Future Without Project

Variable		TY 0 Value	SI	TY 1 Value	SI	TY 5 Value	SI			
V1	% Emergent	100	0.80	100	0.80	100	0.80			
V2	% Aquatic	100	0.50	100	0.50	100	0.50			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.20	0	0.20	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.2	0.2	0.2
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.39	HSI =	0.39			

Project..... Estelle-LCO
FWOP

Variable		TY 10 Value	SI	TY 25 Value	SI	TY 50 Value	SI			
V1	% Emergent	100	0.80	90	0.90	80	1.00			
V2	% Aquatic	100	0.50	100	0.50	100	0.50			
V3	Interspersion	%		%		%				
	Class 1	0	0.20	0	0.60	0	0.60	0	0	0
	Class 2	0		100		100		0	0.6	0.6
	Class 3	0		0		0		0	0	0
	Class 4	100		0		0		0.2	0	0
V4	Hydrology	%		%		%				
	Class 1	0	0.10	0	0.10	0	0.10	0	0	0
	Class 2	0		0		0		0	0	0
	Class 3	0		0		0		0	0	0
	Class 4	100		100		100		0.1	0.1	0.1
V5	%OW <= 1.5ft	0	0.10	0	0.10	0	0.10			
V6	Salinity (ppt) fresh intermediate	1		1		1		1.00	1.00	1.00
V7	Access Value	0	0.30	0	0.30	0	0.30			
		HSI =	0.39	HSI =	0.45	HSI =	0.46			

HU CALCULATION, Fresh/Int. Marsh
Project: Estelle-LCO

Future With Project TY	Acres	x HSI	= HUs	INTERVAL LENGTH x (YRS)	INTERVAL = HUs
0	61	0.39			
1	61	0.39	23.65	1	23.65
5	0	0.15	0.00	4	0.00
10	0	0.15	0.00	5	0.00
25	0	0.15	0.00	15	0.00
50	0	0.15	0.00	25	0.00

Total HU's= 23.65

Future Without Project TY	Acres	x HSI	= HUs	INTERVAL LENGTH x (YRS)	INTERVAL = HUs
0	61	0.39			
1	61	0.39	23.65	1	23.65
5	61	0.39	23.65	4	94.61
10	61	0.39	23.65	5	118.26
25	61	0.45	27.35	15	410.22
50	61	0.46	28.23	25	705.65

Total HU's= 1352.39

NET CHANGE IN HU'S DUE TO PROJECT

A. Future With Project Total HU's =	23.65
B. Future Without Project Total HU's =	1352.39
Net Change (FWP - FWOP) =	-1328.74

APPENDIX J

PHONE MEMORANDUM FROM MR. LARRY HARTZOG

APPENDIX J

PHONE MEMO FROM MR. LARRY HARTZOG

FILE: 071-04

DATE: 10/23/95

TIME: 1400

TO: Kerry Higgins

DISCUSSION:

In reference to the likelihood of Pallid Sturgeon in the vicinity of Belle Chasse. Mr. Hartzog stated that our general dredge location is at River Mile 70; nearest sighting of sturgeon was between River Mile 95 and 100. Usually they are located along the steepest portion of the side slopes of the River, not in the center. The steep side slopes are not likely to hold the sand that the dredge contractor is mining, they are usually composed of clays.

APPENDIX K

LETTERS FROM U.S. FISH AND WILDLIFE SERVICE AND THE LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES

State of Louisiana

Joe L. Herring
Secretary

Department of Wildlife and Fisheries
Rockefeller Wildlife Refuge
Route 1, Box 20-B
Grand Chenier, LA 70643
(318) 538-2276

Edwin W. Edwards
Governor

October 19, 1994

Ms. Kerry Higgins
Hartman Engineering, Inc.
527 W. Esplanade, Suite 300
Kenner, Louisiana 70065

Re: Estelle Plantation

Dear Ms. Higgins:

I have reviewed the project description and map you provided. No bald eagle nests are located in the general vicinity of the project. Nest #57 is located approximately 1.5 miles SSE of proposed project, and will not be affected by the project. Please contact me if you require additional information.

Sincerely,

Thomas J. Hess, Jr.
Biologist, Fur and Refuge

Division

cc: Fred Dunham LDWF

RECEIVED
OCT 24 1994

State of Louisiana

Joe L. Herring
Secretary

Department of Wildlife and Fisheries
Post Office Box 98000
Baton Rouge, LA 70898-9000
(504) 765-2800

Edwin W. Edwards
Governor

June 5, 1995

Kerry Higgins
Hartman Engineering, Inc.
527 W. Esplanade, Suite 300
Kenner, LA 70065

RE: Solicitation of views on Threatened, Endangered and Rare Species for Bunge site on the Luling USGS 7.5 minute topographic quad.

Dear Ms. Higgins:

Personnel of the Natural Heritage Program have reviewed the preliminary data for the captioned project. In reviewing our database, the only rare, threatened, or endangered species or critical habitat found within the area of interest that lies in Louisiana was a Bald Eagle nest approximately 4.5 miles WNW of the site that has been verified active for the last ten years. No state or federal parks, wildlife refuges, or wildlife management areas are known within the Louisiana boundaries. You should also be aware that this site is located within the Coastal Zone and you can contact the Coastal Management Division of the Department of Natural Resources at (504) 342-7591 for more information.

The Louisiana Natural Heritage Program has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. They should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

The Louisiana Natural Heritage Program requires that this office be acknowledged in all reports for data to the user.

Sincerely,

Gary Lester

Gary Lester, Coordinator
Louisiana Natural Heritage Program

GDL:dkc

State of Louisiana

Joe L. Herring
Secretary

Department of Wildlife and Fisheries
Post Office Box 98000
Baton Rouge, LA 70898-9000
(504) 765-2800

Edwin W. Edwards
Governor

June 5, 1995

Kerry Higgins
Hartman Engineering, Inc.
527 W. Esplanade, Suite 300
Kenner, LA 70065

RE: Solicitation of views on Threatened, Endangered and Rare Species for the PP1 site on the Chalmette USGS 7.5 minute topographic quad.

Dear Ms. Higgins:

Personnel of the Natural Heritage Program have reviewed the preliminary data for the captioned project. In reviewing our database, no rare, threatened, or endangered species or critical habitats were found within the area of interest that lies in Louisiana. No state or federal parks, wildlife refuges, or wildlife management areas are known within the Louisiana boundaries. You should be aware, however, that *Scaphirhynchus albus*, a federally listed endangered species, is known to exist in the Mississippi River near the area of interest. Additionally, the site is located within the Coastal Zone. You can contact Coastal Management Division of the Department of Natural Resources at (504) 342-7591 for more information.

The Louisiana Natural Heritage Program has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. Heritage reports summarize the existing information known at the time of the request regarding the location in question. They should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

The Louisiana Natural Heritage Program requires that this office be acknowledged in all reports for data to the user.

Sincerely,

Gary Lester, Coordinator
Louisiana Natural Heritage Program

GDL:dkc

United States Department of the Interior

FISH AND WILDLIFE SERVICE
825 Kaliste Saloom Road
Brandywine Bldg. II, Suite 102
Lafayette, Louisiana 70508

June 14, 1995

Mr. R. H. Schroeder, Jr.
Chief, Planning Division
U.S. Army Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Schroeder:

The following material is provided in response to your May 26, 1995, letter requesting information on threatened and endangered species that could be affected by the Estelle Plantation Partnership Permit Application, SE (Jefferson Parish Wetlands) 238, or six alternate locations for the proposed project. This information is provided in accordance with the Endangered Species Act of 1978, as amended.

The proposed work in the permit application is located in Jefferson Parish, and the subsequently identified alternate sites are located in Jefferson, St. Charles, and Plaquemines Parishes. Federally listed threatened (T) and Endangered (E) species found in the respective Parishes are listed below.

Jefferson Parish

Bald Eagle (T)
Brown Pelican (E)
Piping Plover (T)
Pallid Sturgeon (E)
Kemp's Ridley Sea Turtle (E)

St. Charles Parish

Bald Eagle
Brown Pelican
Gulf Sturgeon (T)
Pallid Sturgeon

Plaquemines Parish

Bald Eagle
Brown Pelican
Piping Plover
Pallid Sturgeon
Green Sea Turtle (T)
Kemp's Ridley Sea Turtle
Loggerhead Sea Turtle (T)

The National Marine Fisheries Service is responsible for aquatic marine threatened or endangered species (e.g., sea turtles). Please, contact Ms. Colleen Coogan (813/570-5312) in St. Petersburg, Florida, for information concerning those species.

The bald eagle is the only species within our jurisdiction that might be affected by construction of the project at the alternate site located south of the originally proposed location (marked with an "EG"

on the map we received). The Jean Lafitte eagle nest (nest number 57) is located within one mile of that alternate site. The Corps should consult with the Fish and Wildlife Service on any activities occurring within one mile of a nest during the nesting season (i.e., October 1 to May 15).

If the proposed alternate site "EG" is selected for project implementation, issuance of the permit would constitute a major Federal action, subject to Section 7(c) of the Endangered Species Act, as amended. In that event, your staff must determine the effects, if any, the proposed work will have on the bald eagle. That assessment of impacts to the bald eagle can be included in any National Environmental Policy Act document being prepared for the permit, or impacts can be addressed in a separate Biological Assessment. In either case, assessment of the impacts to the bald eagle should include:

1. interviews with recognized experts on the bald eagle, including the Fish and Wildlife Service, state conservation agencies, universities, etc.;

2. literature reviews or other scientific information to determine species distribution, habitat needs, and other biological requirements;

3. analysis of the impacts (including cumulative impacts) of the proposed work on individuals and populations of each bald eagle and its habitat; and

4. analysis of the effects that each alternative plan would have on the bald eagle.

If you determine that the proposed work may affect the bald eagle, you must request, in writing, a formal consultation from this office pursuant to Section 7(a) of the Endangered Species Act. A request to initiate formal consultation can accompany submission of the impact assessment to the Fish and Wildlife Service.

Thank you for your interest in conserving threatened and endangered species. If you need further information, including a list of recognized experts for the bald eagle, please contact David Walther of this office at (318) 262-6662, extension 227.

Sincerely,

Russell C. Watson
Acting Field Supervisor

APPENDIX L

CENSUS INFORMATION FOR JEFFERSON PARISH

1990 Census of Population and Housing
Westbank of the Mississippi River

Jefferson Parish

Total population	187,604
SEX	
Male	91,158
Female	96,445
AGE	
Under 5 years	16,636
5 to 17 years	42,846
18 to 20 years	8,907
21 to 24 years	11,428
25 to 44 years	63,055
45 to 54 years	19,965
55 to 59 years	7,073
60 to 64 years	6,659
65 to 74 years	9,024
75 to 84 years	4,026
85 years and over	984
Median age	N/A
Under 18 years	58,731
Percent of total population	31.31
65 years and over	14,034
Percent of total population	7.48
HOUSEHOLDS BY TYPE	
Total households	63,090
Family households (families)	48,445
Married-couple families	35,337
Percent of total households	56.01
Other family, male householder	2,838
Other family, female householder	10,758
Nonfamily households	15,257
Percent of total households	24.18
Householder living alone	12,984
Householder 65 years and over	3,709
Persons living in households	185,841
Persons per household	N/A
GROUP QUARTERS	
Persons living in group quarters	1,763
Institutionalized persons	1,661
Other persons in group quarters	102
RACE AND HISPANIC ORIGIN	
White	123,710
Black	54,760
Percent of total population	29.19
American Indian, Eskimo, or Aleut	1,228
Percent of total population	.65
Asian or Pacific Islander	6,203
Percent of total population	3.31
Other race	2,181
Hispanic origin (of any race)	9,245
Percent of total population	4.93

1990 Census of Population and Housing
Westbank of the Mississippi River

Jefferson Parish

Total housing units	72,879
OCCUPANCY AND TENURE	
Occupied housing units	63,090
Owner occupied	41,502
Percent owner occupied	56.95
Renter occupied	21,588
Vacant housing units	10,036
For seasonal, recreational, or occasional use	1,466
Homeowner vacancy rate (percent)	N/A
Rental vacancy rate (percent)	N/A
Persons per owner-occupied unit	N/A
Persons per renter-occupied unit	N/A
Units with over 1 person per room	4,457
UNITS IN STRUCTURE	
1-unit, detached	47,737
1-unit, attached	3,735
2 to 4 units	8,081
5 to 9 units	3,772
10 or more units	7,325
Mobile home, trailer, other	3,600
VALUE	
Specified owner-occupied units	36,677
Less than $50,000	12,555
$50,000 to $99,000	22,058
$100,000 to $149,000	1,251
$150,000 to $199,999	505
$200,000 to $299,999	318
$300,000 or more	107
Median (dollars)	N/A
CONTRACT RENT	
Specified renter-occupied units paying cash rent	20,172
Less than $250	6,578
$250 to $499	13,395
$500 to $749	1,210
$750 to $999	47
$1,000 or more	34
Median (dollars)	N/A
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER	
Occupied housing units	63,090
White	44,742
Black	16,709
Percent of occupied units	26.48
American Indian, Eskimo, or Aleut	354
Percent of occupied units	.56
Asian or Pacific Islander	1424
Percent of occupied units	2.26
Other race	639
Hispanic origin (of any race)	2,803
Percent of occupied units	4.44

Table P-1. General Characteristics of the Population: 1970—Continued

[For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]

Census Tracts	Kenner—Con.		Marrero (U)								Metairie (U)				
	Tract 0211	Tract 0212	Tract 0264	Tract 0265	Tract 0266	Tract 0267	Tract 0268	Tract 0269	Tract 0270	Tract 0278	Tract 0201	Tract 0202	Tract 0203	Tract 0204	Tract 0213
RACE															
All persons	3 336	1 951	2 199	2 129	3 001	2 638	3 407	5 751	5 420	4 470	6 818	4 862	10 064	2 103	2 713
White	3 332	1 937	2 182	2 118	2 974	2 174	1 057	341	4 465	4 453	6 810	4 727	10 014	2 102	2 709
Negro	1	–	–	3	6	459	2 335	5 406	942	–	3	84	2	–	1
Percent Negro	–	–	–	0.1	0.2	17.4	68.5	94.0	17.4	–	–	1.7	–	–	–
AGE BY SEX															
Male, all ages	1 653	972	1 098	1 102	1 447	1 338	1 675	2 817	2 676	2 202	3 357	2 315	4 985	1 060	1 343
Under 5 years	192	101	126	92	116	142	223	345	318	284	301	237	561	131	157
3 and 4 years	73	40	55	37	48	67	94	154	122	118	139	105	246	57	69
5 to 9 years	228	164	170	144	151	168	211	503	292	350	411	224	739	195	218
5 years	37	27	28	26	29	32	49	88	67	90	80	45	141	41	45
6 years	53	38	41	21	38	35	36	104	54	72	89	47	149	43	38
10 to 14 years	223	151	135	156	155	154	218	479	296	299	447	181	721	152	182
14 years	37	28	22	32	31	42	39	86	65	46	94	40	133	19	31
15 to 19 years	159	86	91	129	133	154	153	347	271	187	324	129	405	69	124
15 years	49	25	20	26	32	44	30	82	64	51	77	26	106	15	29
16 years	27	19	20	21	25	33	32	69	57	41	59	29	102	17	30
17 years	33	20	13	30	30	30	29	80	63	38	79	28	81	19	30
18 years	31	12	17	30	25	26	30	66	39	27	59	20	75	4	22
19 years	19	10	21	22	21	21	32	50	48	30	50	26	41	14	13
20 to 24 years	113	35	57	70	125	108	134	171	229	111	193	240	159	16	55
20 years	27	5	9	15	30	28	35	39	43	21	31	23	28	2	9
21 years	16	7	13	21	22	17	21	46	35	11	34	38	30	3	11
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	393	581	805	182	204
[illegible]	21[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	430	223	521	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	88	[illegible]	67	[illegible]	[illegible]
[illegible] to 59 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	27	14	24	1	6
60 to 64 years	28	16	9	31	60	45	61	41	33	22					
65 to 74 years	8	2	2	10	30	25	14	11	22	–					
75 years and over															
Female, all ages	1 683	979	1 101	1 027	1 554	1 300	1 732	2 934	2 744	2 268	3 461	2 547	5 079	1 043	1 370
Under 5 years	173	92	120	81	99	127	211	373	312	275	297	235	562	123	167
3 and 4 years	66	40	53	32	39	42	81	162	120	122	135	88	254	44	73
5 to 9 years	224	111	156	107	128	130	185	467	311	365	430	233	704	168	186
5 years	37	20	33	21	27	31	43	91	65	56	76	54	133	26	42
6 years	59	22	25	21	20	19	29	100	62	70	78	42	136	37	33
10 to 14 years	206	142	124	118	163	125	205	446	288	336	392	205	683	148	193
14 years	37	30	29	17	31	19	47	90	59	54	64	36	119	20	33
15 to 19 years	159	101	101	99	167	138	187	338	270	187	277	151	390	63	106
15 years	37	27	31	23	27	33	34	89	56	63	79	35	112	19	29
16 years	36	31	20	16	33	28	33	74	49	37	58	27	87	19	24
17 years	39	16	17	21	36	31	45	52	54	42	56	30	92	13	18
18 years	26	15	21	18	31	30	32	62	59	30	45	38	57	6	16
19 years	21	12	12	21	40	16	43	61	52	15	39	21	42	6	19
20 to 24 years	144	58	87	83	112	123	171	205	256	155	235	455	249	36	76
20 years	29	19	14	24	31	34	55	54	45	14	47	50	43	7	15
21 years	28	7	15	16	27	20	39	42	47	27	40	63	30	5	7
25 to 34 years	248	140	218	139	153	185	237	383	398	472	481	555	910	228	231
35 to 44 years	218	165	160	133	179	151	173	331	344	252	493	286	789	182	205
45 to 54 years	164	100	84	125	239	136	164	196	253	129	395	217	461	55	113
55 to 59 years	53	18	17	52	82	39	65	68	111	37	146	81	110	13	32
60 to 64 years	34	14	16	34	95	34	49	50	70	26	111	60	85	9	20
65 to 74 years	39	26	8	34	98	55	48	58	81	22	134	50	89	11	28
75 years and over	21	12	10	22	39	57	37	19	50	12	70	19	47	7	13
RELATIONSHIP TO HEAD OF HOUSEHOLD															
All persons	3 336	1 951	2 199	2 129	3 001	2 638	3 407	5 751	5 420	4 470	6 818	4 862	10 064	2 103	2 713
In households	3 325	1 944	2 199	2 028	2 982	2 525	3 370	5 721	5 391	4 454	6 818	4 858	10 016	2 103	2 709
Head of household	846	491	575	572	932	705	888	1 206	1 516	1 080	1 891	1 716	2 514	511	639
Head of family	802	466	542	514	802	620	759	1 112	1 371	1 041	1 728	1 247	2 431	504	628
Primary individual	44	25	33	58	130	85	129	94	145	39	163	469	83	7	11
Wife of head	731	426	510	481	704	533	618	872	1 241	990	1 588	1 134	2 314	491	58
Other relative of head	1 721	1 019	1 105	969	1 331	1 258	1 802	3 610	2 581	2 369	3 318	1 765	5 141	1 096	1 45
Not related to head	27	8	9	6	15	29	62	33	53	15	21	243	47	5	1
In group quarters	11	7	–	101	19	113	37	30	29	16	–	4	48	–	1
Persons per household	3.93	3.96	3.82	3.55	3.20	3.58	3.80	4.74	3.56	4.12	3.61	2.83	3.98	4.12	4.2
TYPE OF FAMILY AND NUMBER OF OWN CHILDREN															
All families	802	466	542	514	802	620	759	1 112	1 371	1 041	1 728	1 247	2 431	504	62
With own children under 18 years	579	348	396	317	411	409	498	845	857	846	1 079	686	1 856	428	45
Number of children	1 409	875	930	741	918	929	1 230	2 753	1 999	2 104	2 568	1 455	4 452	1 011	1 22
Husband-wife families	731	426	510	481	704	533	618	872	1 241	990	1 588	1 134	2 314	491	58
With own children under 18 years	528	320	375	301	367	365	422	676	796	806	1 009	616	1 790	420	48
Number of children	1 300	813	889	710	828	845	1 055	2 201	1 847	1 996	2 438	1 322	4 316	990	1 20
Percent of total under 18 years	88.6	90.4	93.4	85.0	83.2	80.9	72.5	72.0	85.5	91.5	90.8	88.7	94.9	97.2	95
Families with other male head	16	8	6	9	22	8	27	35	30	9	28	16	27	3	
With own children under 18 years	8	4	3	6	8	4	10	17	11	7	10	8	9	2	
Number of children	19	12	6	11	14	6	24	41	21	19	17	11	18	6	
Families with female head	55	32	26	24	76	79	114	205	100	42	112	97	90	10	
With own children under 18 years	43	24	18	10	36	40	66	152	50	33	60	62	57	6	
Number of children	90	50	35	20	76	78	151	511	131	89	113	122	118	15	1
Percent of total under 18 years	6.1	5.6	3.7	2.4	7.6	7.5	10.4	16.7	6.1	4.1	4.2	8.2	2.6	1.5	
Persons under 18 years	1 467	899	952	835	995	1 045	1 456	3 059	2 160	2 181	2 686	1 490	4 550	1 019	1 12
MARITAL STATUS															
Male, 14 years old and over	1 047	584	689	742	1 056	916	1 062	1 576	1 835	1 315	2 292	1 713	3 097	601	8
Single	255	131	153	207	264	291	297	544	443	282	563	450	675	100	2
Married	766	444	527	503	754	587	707	984	1 308	1 017	1 653	1 201	2 366	496	6
Separated	11	5	8	8	24	25	42	43	39	9	20	43	16	1	
Widowed	12	6	6	14	19	24	30	26	39	6	31	21	31	4	
Divorced	14	3	3	18	19	14	28	22	45	10	45	41	25	1	
Female, 14 years old and over	1 117	664	730	738	1 195	937	1 178	1 738	1 892	1 346	2 406	1 910	3 249	624	8
Single	217	152	150	166	258	192	292	493	366	241	428	525	642	96	
Married	782	451	533	503	771	604	732	1 056	1 338	1 039	1 685	1 219	2 384	500	6
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	42	48	30	3	

Table P-1. General Characteristics of the Population: 1970—Continued

[For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]

Census Tracts	Kenner—Con.		Marrero (U)								Metairie (U)			
	Tract 0211	Tract 0212	Tract 0264	Tract 0265	Tract 0266	Tract 0267	Tract 0268	Tract 0269	Tract 0270	Tract 0278	Tract 0201	Tract 0202	Tract 0203	Tract 0204
RACE														
All persons	3 336	1 951	2 199	2 129	3 001	2 638	3 487	5 751	5 420	4 470	6 818	4 862	10 064	2 103
White	3 332	1 937	2 182	2 118	2 974	2 174	1 057	341	4 465	4 453	6 810	4 727	10 014	2 102
Negro	1	–	–	3	6	459	2 335	5 406	942	–	3	84	2	–
Percent Negro	–	–	–	0.1	0.2	17.4	68.5	94.0	17.4	–	–	1.7	–	–
AGE BY SEX														
Male, all ages	1 653	972	1 098	1 102	1 447	1 338	1 675	2 817	2 676	2 202	3 357	2 315	4 985	1 060
Under 5 years	192	101	126	92	116	142	223	345	318	284	301	237	561	131
3 and 4 years	73	40	55	37	48	67	94	154	122	118	139	105	246	57
5 to 9 years	228	164	170	144	151	168	211	503	292	350	411	224	739	195
5 years	37	27	28	26	29	32	49	88	67	90	80	45	141	41
6 years	53	38	41	21	38	35	36	104	54	72	89	47	149	43
10 to 14 years	223	151	135	156	155	154	218	479	296	299	447	181	721	152
14 years	37	28	22	32	31	42	39	86	65	46	94	40	133	19
15 to 19 years	159	86	91	129	133	154	153	347	271	187	324	129	405	69
15 years	49	25	20	26	32	44	30	82	64	51	77	26	106	15
16 years	27	19	20	21	25	33	32	69	57	41	59	29	102	17
17 years	33	20	13	30	30	30	29	80	63	38	79	28	81	19
18 years	31	12	17	30	25	26	30	66	39	27	59	20	75	4
19 years	19	10	21	22	21	21	32	50	48	30	50	26	41	14
20 to 24 years	113	35	57	70	125	108	134	171	229	111	193	240	159	16
20 years	27	5	9	15	30	28	35	39	43	21	31	23	28	2
21 years	16	7	13	21	22	17	21	46	35	11	34	38	30	3
25 to 34 years	[illegible]	[illegible]	1	164	[illegible]	127	162	296	330	[illegible]	[illegible]	[illegible]	508	206
35 to 44 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	213	[illegible]	[illegible]	430	[illegible]	[illegible]	[illegible]
45 to 54 years	[illegible]	[illegible]	[illegible]	38	93	45	50	70	103	37	127	64	119	19
55 to 59 years	28	16	9	31	70	32	45	44	71	[illegible]	88	[illegible]	[illegible]	6
60 to 64 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
65 to 74 years	28	16	9	31	60	45	61	41	86	22	100	46	56	6
75 years and over	8	2	2	10	30	25	14	11	22	–	27	14	24	1
Female, all ages	1 683	979	1 101	1 027	1 554	1 300	1 732	2 934	2 744	2 268	3 461	2 547	5 079	1 043
Under 5 years	173	92	120	81	99	127	211	373	312	275	297	235	562	123
3 and 4 years	66	40	53	32	39	42	81	162	120	122	135	88	254	44
5 to 9 years	224	111	156	107	128	130	185	467	311	365	430	233	704	168
5 years	37	20	33	21	27	31	43	91	65	56	76	54	133	26
6 years	59	22	25	21	20	19	29	100	62	70	78	42	136	37
10 to 14 years	206	142	124	118	163	125	205	446	288	336	392	205	683	148
14 years	37	30	29	17	31	19	47	90	59	54	64	36	119	20
15 to 19 years	159	101	101	99	167	138	187	338	270	187	277	151	390	63
15 years	37	27	31	23	27	33	34	89	56	63	79	35	112	19
16 years	36	31	20	16	33	28	33	74	49	37	58	27	87	19
17 years	39	16	17	21	36	31	45	52	54	42	56	30	92	13
18 years	26	15	21	18	31	30	32	62	59	30	45	38	57	6
19 years	21	12	12	21	40	16	43	61	52	15	39	21	42	6
20 to 24 years	144	58	87	83	112	123	171	205	256	155	235	455	249	36
20 years	29	19	14	24	31	34	55	54	45	14	47	50	43	7
21 years	28	7	15	16	27	20	39	42	47	27	40	63	30	5
25 to 34 years	248	140	218	139	153	185	237	383	398	472	481	555	910	228
35 to 44 years	218	165	160	133	179	151	173	331	344	252	493	286	789	182
45 to 54 years	164	100	84	125	239	136	164	196	253	129	395	217	461	55
55 to 59 years	53	18	17	52	82	39	65	68	111	37	146	81	110	13
60 to 64 years	34	14	16	34	95	34	49	50	70	26	111	60	85	9
65 to 74 years	39	26	8	34	98	55	48	58	81	22	134	50	89	11
75 years and over	21	12	10	22	39	57	37	19	50	12	70	19	47	7
RELATIONSHIP TO HEAD OF HOUSEHOLD														
All persons	3 336	1 951	2 199	2 129	3 001	2 638	3 487	5 751	5 420	4 470	6 818	4 862	10 064	2 103
In households	3 325	1 944	2 199	2 028	2 982	2 525	3 370	5 721	5 391	4 454	6 818	4 858	10 016	2 103
Head of household	846	491	575	572	932	705	888	1 206	1 516	1 080	1 891	1 716	2 514	511
Head of family	802	466	542	514	802	620	759	1 112	1 371	1 041	1 728	1 247	2 431	504
Primary individual	44	25	33	58	130	85	129	94	145	39	163	469	83	7
Wife of head	731	426	510	481	704	533	618	872	1 241	990	1 588	1 134	2 314	491
Other relative of head	1 721	1 019	1 105	969	1 331	1 258	1 802	3 610	2 581	2 369	3 318	1 765	5 141	1 096
Not related to head	27	8	9	6	15	29	62	33	53	15	21	243	47	5
In group quarters	11	7	–	101	19	113	37	30	29	16	–	4	48	–
Persons per household	3.93	3.96	3.82	3.55	3.20	3.58	3.80	4.74	3.56	4.12	3.61	2.83	3.98	4.12
TYPE OF FAMILY AND NUMBER OF OWN CHILDREN														
All families	802	466	542	514	802	620	759	1 112	1 371	1 041	1 728	1 247	2 431	504
With own children under 18 years	579	348	396	317	411	409	498	845	857	846	1 079	686	1 856	428
Number of children	1 409	875	930	741	918	929	1 230	2 753	1 999	2 104	2 568	1 455	4 452	1 011
Husband-wife families	731	426	510	481	704	533	618	872	1 241	990	1 588	1 134	2 314	491
With own children under 18 years	528	320	375	301	367	365	422	676	796	806	1 009	616	1 790	420
Number of children	1 300	813	889	710	828	845	1 055	2 201	1 847	1 996	2 438	1 322	4 316	990
Percent of total under 18 years	88.6	90.4	93.4	85.0	83.2	80.9	72.5	72.0	85.5	91.5	90.8	88.7	94.9	97.2
Families with other male head	16	8	6	9	22	8	27	35	30	9	28	16	27	3
With own children under 18 years	8	4	3	6	8	4	10	17	11	7	10	8	9	2
Number of children	19	12	6	11	14	6	24	41	21	19	17	11	18	6
Families with female head	55	32	26	24	76	79	114	205	100	42	112	97	90	10
With own children under 18 years	43	24	18	10	36	40	66	152	50	33	60	62	57	6
Number of children	90	50	35	20	76	78	151	511	131	89	113	122	118	15
Percent of total under 18 years	6.1	5.6	3.7	2.4	7.6	7.5	10.4	16.7	6.1	4.1	4.2	8.2	2.6	1.5
Persons under 18 years	1 467	899	952	835	995	1 045	1 456	3 059	2 160	2 181	2 686	1 490	4 550	1 019
MARITAL STATUS														
Male, 14 years old and over	1 047	584	689	742	1 056	916	1 062	1 576	1 835	1 315	2 292	1 713	3 097	601
Single	255	131	153	207	264	291	297	544	443	282	563	450	675	100
Married	766	444	527	503	754	587	707	984	1 308	1 017	1 653	1 201	2 366	496
Separated	11	5	8	8	24	25	42	43	39	9	20	43	16	1
Widowed	12	6	6	14	19	24	30	26	39	6	31	21	31	4
Divorced	14	3	3	18	19	14	28	22	45	10	45	41	25	1
Female, 14 years old and over	1 117	664	730	738	1 195	937	1 178	1 738	1 892	1 346	2 406	1 910	3 249	624
Single	[illegible]	152	150	166	258	192	292	493	366	241	428	525	[illegible]	[illegible]

Table H-1. Occupancy, Utilization, and Financial Characteristics of Housing Units: 1970

(For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text)

Census Tracts	Total SMSA	Jefferson Parish				New Orleans (Orleans Parish)	St. Bernard Parish	St. Tammany Parish	Kenner					
		Total	Kenner	Marrero					Tract 0205	Tract 0206	Tract 0207	Tract 0208	Tract 0209	Tract 0210
All housing units	345 561	101 314	8 208	7 862		208 524	14 228	21 495	3 188	311	782	891	561	1 091
Vacant—seasonal and migratory	815	8	1	–		577	19	211	1	–	–	–	–	–
All year-round housing units	344 746	101 306	8 207	7 862		207 947	14 209	21 284	3 187	311	782	891	561	1 091
TENURE, RACE, AND VACANCY STATUS														
Owner occupied	163 545	66 140	5 405	5 224		73 517	10 671	13 217	2 418	240	407	364	197	679
Cooperative and condominium	581	164	20	45		372	45	–	9	–	5	–	–	–
White	135 662	60 565	4 706	3 920		53 367	10 315	11 415	2 131	239	271	252	43	676
Negro	27 336	5 380	683	1 290		19 875	308	1 773	283	–	136	110	154	–
Renter occupied	154 873	29 372	2 224	2 255		17 846	3 038	4 617	465	60	327	460	313	362
White	93 580	24 594	1 477	1 506		62 788	2 761	3 437	340	59	227	220	33	361
Negro	60 574	4 669	744	735		54 475	268	1 162	125	1	99	239	280	–
Vacant year-round	26 328	5 794	578	388		16 584	500	3 450	304	11	48	67	51	50
For sale only	2 572	934	109	80		1 194	64	380	82	3	3	1	6	2
Vacant less than 6 months	1 639	657	86	60		745	43	194	70	...	...	...	2	...
Median price asked	$19 600	$19 900	$19 600	$16 600		$22 300	$18 300	$16 000	$20 900	...	...	...	...	...
For rent	15 063	2 743	299	208		11 451	210	659	142	4	20	57	22	33
Vacant less than 2 months	9 248	1 761	164	86		7 074	120	293	79	...	12	23	5	23
Median rent asked	$74	$107	$115	$68		$71	$102	$67	$137	...	$90	$60	$57	$121
Other	8 693	2 117	170	100		3 939	226	2 411	80	4	25	9	23	15
LACKING SOME OR ALL PLUMBING FACILITIES														
All units	12 272	2 388	207	337		7 332	348	2 204	14	1	48	45	93	4
Owner occupied	3 018	855	64	100		1 096	152	915	10	1	21	10	20	2
Negro	1 599	440	49	78		596	41	522	4	–	17	9	19	–
Renter occupied	7 772	1 202	100	199		5 200	177	771	[illegible]					
Negro	[illegible]	[illegible]	[illegible]	[illegible]		3 [illegible]	[illegible]	527	[illegible]					
Vacant year-round	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	4					
For sale only	[illegible]	[illegible]	[illegible]	[illegible]		371	6	54	–	–	–	–	[illegible]	
For rent	[illegible]	[illegible]	[illegible]	[illegible]		625	9	101	–	–	–	4	1	–
COMPLETE KITCHEN FACILITIES AND ACCESS														
Lacking complete kitchen facilities	7 868	1 354	107	146		4 668	176	1 670	19	–	21	13	33	3
Access only through other living quarters	411	53	6	8		346	6	6	3	–	–	2	1	–
ROOMS														
1 room	6 206	633	33	41		5 293	44	236	6	1	6	5	11	3
2 rooms	19 657	3 465	235	378		15 357	210	625	5	18	73	58	53	23
3 rooms	53 242	10 837	742	1 135		39 268	983	2 154	115	9	126	226	173	56
4 rooms	85 934	20 874	1 760	1 710		36 834	3 505	4 721	430	71	255	284	145	314
5 rooms	82 993	27 700	2 542	2 524		24 242	5 077	5 974	970	120	177	169	81	396
6 rooms	52 085	20 904	1 705	1 366		14 122	2 934	4 125	893	69	91	89	53	202
7 rooms	24 390	10 050	763	446		1 415	1 009	1 916	477	16	44	29	31	61
8 rooms	11 822	4 419	324	185		6 203	299	901	231	4	8	17	9	25
9 rooms or more	8 417	2 424	103	77		5 213	148	632	60	3	2	14	5	11
Median	4.6	5.0	5.0	4.8		4.3	5.0	5.0	5.6	5.0	4.2	4.1	3.8	4.9
All occupied housing units	318 418	95 512	7 629	7 474		91 363	13 709	17 834	2 883	300	734	824	510	1 041
PERSONS														
1 person	57 560	10 164	548	660		13 909	1 033	2 454	100	21	108	118	82	58
2 persons	84 616	23 663	1 483	1 574		23 530	2 952	4 471	392	63	197	209	107	261
3 persons	55 896	18 571	1 466	1 415		11 670	2 713	2 942	528	63	131	164	99	220
4 persons	47 627	17 895	1 583	1 438		8 868	2 915	2 949	701	64	105	137	63	211
5 persons	32 022	12 053	1 151	1 025		5 669	2 057	2 243	521	37	82	79	58	151
6 persons or more	40 697	13 166	1 398	1 362		12 717	2 039	2 775	641	52	111	117	101	140
Median, all occupied units	2.8	3.3	3.7	3.6		2.5	3.6	3.2	4.1	3.5	3.0	3.0	3.2	3.4
Median, owner occupied units	3.2	3.6	3.9	3.7		2.8	3.7	3.2	4.2	3.6	3.2	2.8	3.2	3.5
Median, renter occupied units	2.4	2.6	3.3	3.2		2.3	2.9	3.1	3.7	3.2	2.8	3.2	3.1	3.3
Units with roomers, boarders, or lodgers	5 410	924	88	59		4 193	81	212	17	4	11	9	14	22
PERSONS PER ROOM														
1.00 or less	275 830	84 585	6 381	5 984		163 993	11 855	15 397	2 488	257	584	645	361	895
1.01 to 1.50	27 900	7 850	892	965		9 923	1 436	1 691	310	34	85	101	73	128
1.51 or more	14 688	3 077	356	525		7 447	418	746	85	9	65	78	76	18
Units with all plumbing facilities—1.01 or more	40 069	10 302	1 191	1 384		16 081	1 775	1 911	394	43	133	166	124	145
VALUE														
Specified owner occupied units[1]	135 959	61 157	4 931	4 778		35 033	9 313	10 456	2 368	173	286	303	150	629
Less than $5,000	2 666	815	56	87		827	175	849	10	–	22	12	6	3
$5,000 to $7,499	3 573	1 185	82	194		1 208	181	999	20	3	19	17	17	2
$7,500 to $9,999	5 229	1 880	154	345		1 135	237	977	40	7	31	31	19	10
$10,000 to $14,999	19 691	8 539	972	1 034		3 063	1 048	2 041	374	42	89	102	40	143
$15,000 to $19,999	36 668	17 946	2 072	1 622		3 361	3 428	1 933	984	99	80	79	35	284
$20,000 to $24,999	26 212	12 253	959	898		2 008	2 551	1 400	508	18	26	30	13	113
$25,000 to $34,999	24 596	12 438	413	462		1 540	1 336	1 282	262	4	15	22	14	53
$35,000 to $49,999	10 710	4 269	198	102		489	307	645	164	–	2	5	5	13
$50,000 or more	6 614	1 832	25	34		402	50	330	6	–	2	5	1	8
Median	$20 000	$20 100	$18 100	$17 200		$21 000	$19 500	$16 000	$18 900	$16 500	$14 200	$14 400	$13 700	$17 400
CONTRACT RENT														
Specified renter occupied units[2]	152 346	29 098	2 193	2 219		15 995	2 974	4 279	461	60	323	445	307	361
Less than $30	10 236	773	65	121		844	108	511	20	2	8	19	13	3
$30 to $39	6 010	743	56	111		747	74	446	17	–	11	9	17	–
$40 to $59	30 939	3 896	280	644		5 924	356	763	23	2	45	101	100	5
$60 to $79	44 477	4 621	524	561		3 451	719	686	58	9	67	165	127	84
$80 to $99	17 739	3 133	374	228		664	604	338	53	21	58	103	16	73
$100 to $149	23 637	8 351	687	350		773	815	698	237	21	112	17	14	168
$150 to $199	9 947	4 779	102	62		990	46	132	41	4	–	–	2	17
$200 to $249	1 943	783	1	3		137	1	22	1	–	–	–	–	–
$250 or more	1 325	410	3	1		391	1	23	2	–	1	–	–	–
No cash rent	6 093	1 609	101	138		574	250	660	9	1	21	31	18	11
Median	$70	$103	$86	$65		67	$84	$62	$111	$97	$85	$69	$62	$102

[illegible] or more

[illegible] Limited to one-family homes on less than 10 acres and no business or property. [illegible] Excludes [illegible]

Table P-2. Social Characteristics of the Population: 1970

[Data based on sample, see text. For minimum base for derived figures (percent, median, etc.) and meaning of symbols, see text]

Census Tracts	Total SMSA	Jefferson Parish					New Orleans (Orleans Parish)	St. Bernard Parish	St. Tammany Parish	Kenner			
		Total	Kenner	Marrero (U)	Metairie (U)	Balance				Tract 0205	Tract 0206	Tract 0207	Tract 0208
NATIVITY, PARENTAGE, & COUNTRY OF ORIGIN													
All persons	**1 045 805**	**337 568**	**29 900**	**29 015**	**135 804**	**142 849**	**593 467**	**51 185**	**63 585**	**12 355**	**1 332**	**2 386**	**2 845**
Native of native parentage	963 850	312 773	27 903	27 903	122 847	134 120	542 639	47 331	61 107	11 556	1 257	2 223	2 559
Native of foreign or mixed parentage	56 271	18 439	1 542	867	9 696	6 334	32 719	3 149	1 964	608	64	110	245
Foreign born	25 684	6 356	455	245	3 261	2 395	18 109	705	514	191	11	53	41
Foreign stock	**81 955**	**24 795**	**1 997**	**1 112**	**12 957**	**8 729**	**50 828**	**3 854**	**2 478**	**799**	**75**	**163**	**286**
United Kingdom	4 121	1 384	105	8	762	509	2 253	212	272	55	–	17	–
Ireland (Eire)	1 869	550	36	–	315	199	1 210	39	70	12	–	6	–
Sweden	594	183	–	–	150	33	339	17	55	–	–	–	–
Germany	6 804	2 258	115	41	1 416	686	3 970	207	369	69	–	–	–
Poland	1 697	399	13	8	283	95	1 253	27	18	13	–	–	–
Czechoslovakia	496	133	21	–	83	29	332	7	24	–	–	–	–
Austria	1 097	290	21	–	189	80	708	57	42	15	–	–	–
Hungary	549	222	41	14	129	38	261	15	51	33	–	–	–
U.S.S.R.	2 125	478	24	–	374	80	1 587	37	23	–	–	–	5
Italy	17 775	5 924	610	480	2 915	1 919	10 039	1 525	287	119	33	85	190
Canada	2 663	880	34	52	447	347	1 507	94	182	19	–	5	–
Mexico	2 349	648	82	41	337	188	1 519	134	48	32	5	–	35
Cuba	5 211	1 275	165	38	478	594	3 892	21	23	15	–	19	–
Other America	15 372	4 449	328	97	2 292	1 732	9 977	619	327	231	–	7	25
All other and not reported	19 233	5 722	402	333	2 787	2 200	11 981	843	687	186	37	24	31
Persons of Spanish language[1]	44 430	12 294	1 209	359	5 643	5 083	26 408	4 695	1 033	496	34	33	229
Other persons of Spanish surname[1]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Persons of Spanish mother tongue	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Persons of Puerto Rican birth or parentage	11 [illegible]	417	[illegible]	7	220	156	851	[illegible]	[illegible]	[illegible]	[illegible]	–	–
SCHOOL ENROLLMENT													
Enrolled persons, 3 to 34 years old	**316 870**	**104 659**	**9 685**	**9 552**	**42 670**	**42 752**	**176 012**	**16 748**	**19 459**	**4 316**	**425**	**734**	**665**
Nursery school	6 630	2 157	188	123	1 109	737	4 044	229	200	102	4	12	12
Public	1 008	123	14	8	45	56	847	19	19	14	–	–	–
Kindergarten	15 277	4 704	389	396	2 251	1 668	8 930	1 086	557	211	4	6	7
Public	7 538	453	23	42	107	281	6 151	893	41	19	4	–	–
Elementary	192 438	67 491	6 924	6 579	25 353	28 635	101 237	10 357	13 353	3 218	334	568	469
Public	142 858	46 978	5 849	4 807	15 105	21 217	76 368	8 312	11 200	2 812	305	506	410
High school	71 070	22 940	1 816	2 061	9 686	9 377	39 415	4 067	4 648	679	68	123	168
Public	51 923	15 443	1 398	1 746	5 567	6 732	28 800	3 522	4 158	584	46	117	122
College	31 455	7 367	368	393	4 271	2 335	22 386	1 001	701	106	15	25	9
Percent enrolled in school by age:													
16 and 17 years	86.6	86.0	85.4	77.9	92.2	82.0	86.9	90.0	83.7	93.8	99.9	47.7	90.8
18 and 19 years	56.2	49.4	39.5	50.9	57.9	44.0	61.3	49.2	39.4	36.5	42.4	50.0	31.3
20 and 21 years	28.9	21.9	15.4	9.0	33.7	16.0	33.9	17.3	13.3	9.8	...	6.6	–
22 to 24 years	13.2	9.4	2.6	8.2	13.5	7.1	16.4	7.7	6.6	1.4	–	4.1	–
25 to 34 years	6.1	4.4	2.0	4.1	5.6	3.9	7.7	4.7	3.8	2.1	–	–	–
Percent 16 to 21 years not high school graduates and not enrolled in school	20.1	20.8	26.9	26.6	10.9	26.9	19.5	17.7	26.0	19.1	14.2	47.6	44.5
YEARS OF SCHOOL COMPLETED													
Persons, 25 years old and over	**542 918**	**167 297**	**13 194**	**13 212**	**70 935**	**69 956**	**318 872**	**26 968**	**31 781**	**5 046**	**507**	**1 212**	**1 409**
No school years completed	10 011	2 817	190	445	520	1 662	6 224	395	575	33	6	48	68
Elementary: 1 to 4 years	33 916	7 848	774	1 292	1 458	4 324	22 731	1 262	2 075	120	19	164	230
5 to 7 years	84 944	22 038	2 052	3 011	5 770	11 205	54 515	4 144	4 247	540	112	230	406
8 years	57 825	14 240	1 289	1 269	5 037	6 645	37 758	2 911	2 916	454	41	132	162
High school: 1 to 3 years	107 344	32 413	2 773	3 055	11 731	14 854	62 917	5 652	6 362	1 035	117	234	251
4 years	140 777	51 161	4 294	3 021	24 140	19 706	72 767	8 087	8 762	1 949	188	272	189
College: 1 to 3 years	50 673	18 331	1 105	645	10 524	6 057	27 483	1 593	3 266	485	24	102	35
4 years or more	57 428	18 449	717	474	11 755	5 503	34 477	924	3 578	430	–	30	68
Median school years completed	11.4	12.1	11.5	9.6	12.5	11.3	10.8	11.0	11.9	12.2	10.9	9.4	8.0
Percent high school graduates	45.8	52.6	46.4	31.3	65.4	44.7	42.3	42.5	49.1	56.8	41.8	33.3	20.7
CHILDREN EVER BORN													
Women, 35 to 44 years old ever married	**58 275**	**20 542**	**1 702**	**1 694**	**8 846**	**8 300**	**30 622**	**3 567**	**3 544**	**637**	**70**	**150**	**141**
Children ever born	193 945	65 498	5 709	6 286	26 033	27 470	104 797	11 095	12 555	2 319	235	620	375
Per 1,000 women ever married	3 328	3 188	3 354	3 711	2 943	3 310	3 422	3 110	3 543	3 641	3 357	4 133	2 660
RESIDENCE IN 1965													
Persons, 5 years old and over, 1970[2]	**950 253**	**302 876**	**26 282**	**25 846**	**123 020**	**127 728**	**543 535**	**46 314**	**57 528**	**10 697**	**1 145**	**2 210**	**2 490**
Same house as in 1970	491 517	151 605	13 487	13 003	60 282	64 833	285 555	26 822	27 535	4 510	596	990	1 374
Different house:													
In central city of this SMSA	196 231	38 336	2 990	2 024	19 157	14 165	146 328	7 487	4 080	1 696	42	118	110
In other part of this SMSA	81 448	53 798	4 731	5 814	20 839	22 414	7 989	7 210	12 451	1 620	254	631	655
Outside this SMSA	90 210	35 577	3 172	2 235	15 243	14 927	43 182	2 570	8 881	1 731	111	349	110
North and West	22 912	8 432	850	211	3 979	3 392	12 052	307	2 121	394	44	98	6
South	67 298	27 145	2 322	2 024	11 264	11 535	31 130	2 263	6 760	1 337	67	251	104
Abroad	10 699	2 397	135	108	1 137	1 017	7 804	149	349	68	–	7	26
MEANS OF TRANSPORTATION AND PLACE OF WORK													
All workers	**363 821**	**121 113**	**10 179**	**9 567**	**52 122**	**49 245**	**205 903**	**17 448**	**19 357**	**4 007**	**454**	**865**	**882**
Private auto: Driver	211 949	86 644	7 265	6 646	39 181	33 552	99 450	12 671	13 184	3 243	333	508	545
Passenger	41 839	14 937	1 249	1 313	6 043	6 332	21 350	2 252	3 300	455	77	118	135
Bus or streetcar	71 846	7 977	764	749	3 060	3 404	62 522	1 009	338	145	33	121	78
Subway, elevated train, or railroad	161	13	–	–	13	–	135	13	–	–	–	–	–
Walked to work	18 530	4 138	269	372	960	2 537	13 063	447	882	31	–	52	35
Worked at home	5 980	1 764	181	142	835	606	3 499	194	523	32	–	24	50
Other	13 516	5 640	451	345	2 030	2 814	5 884	862	1 130	101	11	42	39
Inside SMSA	321 152	108 251	9 081	8 420	47 601	43 149	180 831	15 806	16 264	3 603	395	776	763
New Orleans – central business district	63 412	15 285	1 015	416	8 962	4 892	44 688	2 687	752	483	42	31	27
Remainder of New Orleans city (Orleans Parish)	154 051	31 645	2 390	1 451	16 978	10 826	113 513	6 325	2 568	1 137	103	133	105
Jefferson Parish	82 570	59 837	5 621	6 284	21 237	26 695	20 233	1 104	1 396	1 959	244	612	631
St. Tammany Parish	12 425	818	7	218	133	460	327	30	11 250	7	–	–	–
St. Bernard Parish	8 694	666	48	51	291	276	2 070	5 660	298	17	6	–	–
Outside SMSA	10 561	5 016	451	377	1 687	2 501	3 715	431	1 399	189	6	37	10
Place of work not reported	32 108	7 846	647	770	2 834	3 595	21 357	1 211	1 694	215	53	52	109

[1] See text for definition. [2] Includes "Moved, 1965 residence not reported."

Table P-2. General Characteristics of White Persons: 1980

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts [400 or More White Persons and 400 or More of a Specified Racial Group]

	The SMSA	Jefferson Parish: Total	Estelle (CDP)	Gretna city	Harahan city	Harvey (CDP)	Jefferson (CDP)	Kenner city	Marrero (CDP)	Metairie (CDP)	River Ridge (CDP)	Terrytown (CDP)	Timberlane (CDP)
AGE													
Total persons	774 421	380 645	11 337	14 506	11 256	15 401	13 081	55 157	21 325	153 748	14 882	21 669	10 360
Under 5 years	52 928	29 067	1 462	932	732	1 392	619	5 557	1 756	9 368	893	1 735	829
5 to 9 years	52 436	28 945	1 404	794	751	1 228	514	5 212	1 763	9 939	1 017	1 869	1 056
10 to 14 years	57 403	31 368	1 178	913	813	1 219	571	5 142	1 888	11 697	1 187	2 086	1 246
15 to 19 years	66 108	34 157	922	1 305	1 055	1 365	894	4 777	2 055	13 332	1 453	2 307	991
20 to 24 years	74 411	36 836	1 009	1 578	1 062	1 805	1 331	5 283	1 819	14 766	1 320	2 258	796
25 to 34 years	141 877	71 831	2 697	2 125	1 783	3 130	2 031	12 733	3 553	28 139	2 382	4 111	2 131
35 to 44 years	90 705	47 261	1 423	1 525	1 183	1 897	1 060	7 020	2 630	19 150	1 901	3 209	1 691
45 to 54 years	81 499	39 439	709	1 894	1 454	1 339	1 292	4 514	2 366	17 314	2 043	2 145	877
55 to 64 years	76 308	33 096	352	1 783	1 376	1 017	2 139	2 879	1 791	15 846	1 589	1 198	505
65 to 74 years	50 333	19 067	136	1 139	717	634	1 629	1 387	1 071	9 416	749	524	175
75 years and over	30 413	9 578	45	518	330	375	1 001	653	633	4 781	348	227	63
3 and 4 years	20 294	11 120	623	336	272	525	230	2 078	698	3 568	364	681	338
16 years and over	598 511	284 243	7 060	11 640	8 767	11 287	11 221	38 273	15 471	120 053	11 463	15 478	7 007
18 years and over	572 109	270 255	6 684	11 153	8 325	10 781	10 870	36 326	14 633	114 582	10 833	14 534	6 560
21 years and over	531 306	250 078	6 209	10 225	7 681	9 842	10 236	33 586	13 491	106 641	10 072	13 180	6 074
60 years and over	114 033	42 693	322	2 441	1 651	1 451	3 636	3 169	2 455	21 011	1 716	1 209	439
62 years and over	99 602	36 539	257	2 116	1 372	1 253	3 184	2 690	2 135	18 049	1 439	995	343
Median	30.6	29.0	23.8	32.6	31.8	26.9	39.8	26.2	28.7	31.1	31.5	26.4	26.4
Female	397 015	194 125	5 700	7 358	5 734	7 611	6 843	27 755	10 859	79 802	7 407	10 879	5 182
Under 5 years	25 732	14 212	743	489	338	682	305	2 730	859	4 578	420	824	413
5 to 9 years	25 624	14 083	701	401	344	585	247	2 538	837	4 901	484	917	538
10 to 14 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	280	2 535	890	5 816	574	1 031	636
15 to 19 years	[illegible]	[illegible]	473	632	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20 to 24 years	[illegible]	[illegible]	554	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7 601	614	1 104	375
25 to 34 years	[illegible]	36 063	1 377	944	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35 to 44 years	44 857	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 731	967	1 633	[illegible]
45 to 54 years	41 707	19 942	309	995	780	644	670	2 221	1 174	[illegible]	[illegible]	[illegible]	[illegible]
55 to 64 years	40 269	17 346	182	899	699	542	1 203	1 490	911	8 452	784	616	250
65 to 74 years	29 856	11 123	81	676	397	381	949	820	647	5 498	428	313	93
75 years and over	20 784	6 396	28	357	215	238	675	432	434	3 223	214	149	44
3 and 4 years	9 861	5 424	310	174	121	268	108	1 041	337	1 716	167	320	165
16 years and over	310 901	146 840	3 557	5 898	4 537	5 655	5 951	19 503	8 059	63 118	5 772	7 852	3 490
18 years and over	297 683	139 823	3 364	5 675	4 331	5 388	5 786	18 553	7 627	60 385	5 456	7 363	3 257
21 years and over	277 292	129 544	3 120	5 227	3 994	4 888	5 454	17 146	7 046	56 390	5 085	6 635	3 011
60 years and over	68 495	25 028	177	1 468	907	851	2 196	1 852	1 481	12 428	941	703	233
62 years and over	60 979	21 855	148	1 291	773	759	1 942	1 600	1 321	10 882	811	594	190
Median	31.7	29.6	23.6	35.2	33.1	27.3	46.8	26.4	29.5	32.1	32.7	26.6	26.3
HOUSEHOLD TYPE AND RELATIONSHIP													
Total persons	774 421	380 645	11 337	14 506	11 256	15 401	13 081	55 157	21 325	153 748	14 882	21 669	10 360
In households	762 102	378 764	11 337	14 298	11 256	15 209	12 604	54 972	21 092	153 299	14 831	21 669	10 360
Householder	289 823	134 927	3 192	5 708	3 870	5 485	5 756	17 790	7 123	58 259	5 181	7 200	3 176
Family householder	204 296	102 512	2 956	3 980	3 221	4 097	3 582	14 561	5 783	41 621	4 074	5 688	2 708
Nonfamily householder	85 527	32 415	236	1 728	649	1 388	2 174	3 229	1 340	16 638	1 107	1 512	468
Living alone	72 872	27 317	191	1 493	554	1 113	1 932	2 571	1 209	14 125	933	1 152	353
Spouse	171 938	87 790	2 649	3 231	2 811	3 485	2 856	12 550	5 092	35 336	3 624	4 842	2 416
Other relatives	279 131	147 169	5 334	4 947	4 387	5 731	3 650	23 318	8 521	55 882	5 755	9 008	4 56[illegible]
Nonrelatives	21 210	8 878	162	412	188	508	342	1 314	356	3 822	271	619	20[illegible]
Inmate of institution	5 893	1 663	–	208	–	192	403	181	215	395	51	–	–
Other, in group quarters	6 426	218	–	–	–	–	74	4	18	54	–	–	–
Persons per household	2.63	2.81	3.54	2.51	2.91	2.77	2.19	3.09	2.96	2.63	2.87	3.01	3.2[illegible]
Persons per family	3.21	3.29	3.69	3.06	3.23	3.25	2.82	3.46	3.35	3.19	3.31	3.43	3.5[illegible]
Persons 65 years and over	80 746	28 645	181	1 657	1 047	1 009	2 630	2 040	1 704	14 197	1 097	751	23[illegible]
In households	77 199	27 639	181	1 657	1 047	851	2 451	1 878	1 591	13 812	1 088	751	23[illegible]
Householder	50 093	16 873	85	1 107	618	519	1 619	1 003	1 057	8 414	606	388	12[illegible]
Nonfamily householder	23 355	6 812	24	500	210	211	736	364	514	3 336	202	141	3[illegible]
Living alone	22 582	6 593	24	484	202	204	712	354	502	3 225	199	135	3[illegible]
Spouse	15 108	5 831	33	346	240	194	513	349	332	2 936	249	143	3[illegible]
Other relatives	11 003	4 626	59	179	183	129	292	498	182	2 309	222	218	7[illegible]
Nonrelatives	995	309	4	25	6	9	27	28	20	153	11	2	[illegible]
Inmate of institution	3 227	985	–	–	–	158	176	162	113	367	9	–	[illegible]
Other, in group quarters	320	21	–	–	–	–	3	–	–	18	–	–	[illegible]
FAMILY TYPE BY PRESENCE OF OWN CHILDREN													
Families	204 296	102 512	2 956	3 980	3 221	4 097	3 582	14 561	5 783	41 621	4 074	5 688	2 7[illegible]
With own children under 18 years	101 239	55 181	2 201	1 692	1 520	2 342	1 101	9 316	3 274	20 131	2 016	3 575	1 7[illegible]
Number of own children under 18 years	187 849	103 054	4 363	2 976	2 731	4 288	1 870	17 697	6 091	37 126	3 833	6 666	3 6[illegible]
Married-couple families	172 094	87 881	2 647	3 225	2 816	3 499	2 866	12 571	5 083	35 339	3 632	4 851	2 4[illegible]
With own children under 18 years	86 542	47 529	1 977	1 358	1 335	1 991	870	8 029	2 881	17 158	1 806	3 049	1 5[illegible]
Number of own children under 18 years	163 548	90 202	3 920	2 430	2 439	3 706	1 533	15 413	5 368	32 364	3 448	5 832	3 2[illegible]
Female householder, no husband present	24 969	11 398	231	581	323	453	528	1 582	540	4 981	321	636	[illegible]
With own children under 18 years	12 290	6 389	181	269	157	284	188	1 095	318	2 514	165	444	[illegible]
Number of own children under 18 years	20 541	10 835	370	444	248	484	277	1 985	591	4 065	303	710	[illegible]
MARITAL STATUS													
Male, 15 years and over	294 280	140 914	3 615	5 847	4 311	5 776	5 366	19 294	7 645	58 237	5 856	7 872	[illegible]
Single	85 218	37 084	682	1 650	1 115	1 479	1 547	4 653	1 748	16 427	1 633	2 182	[illegible]
Now married, except separated	178 715	90 667	2 696	3 399	2 903	3 640	3 009	12 926	5 260	36 331	3 760	4 994	[illegible]
Separated	7 573	3 558	72	199	77	212	170	521	179	1 415	116	196	[illegible]
Widowed	7 210	2 619	38	159	85	100	231	212	155	1 168	102	91	[illegible]
Divorced	15 564	6 986	127	440	131	345	409	982	303	2 896	245	409	[illegible]
Female, 15 years and over	317 374	150 351	3 678	6 020	4 649	5 786	6 011	19 952	8 273	64 507	5 929	8 107	[illegible]
Single	68 585	30 155	530	1 106	873	991	1 184	3 596	1 396	14 528	1 250	1 751	[illegible]
Now married, except separated	177 659	90 293	2 701	3 341	2 902	3 605	2 986	12 891	5 259	36 242	3 718	4 978	[illegible]
Separated	9 216	4 551	113	265	106	224	150	690	263	1 797	144	262	[illegible]
Widowed	40 897	15 419	164	868	499	583	1 260	1 365	949	7 289	537	512	[illegible]
Divorced	21 017	9 933	170	440	269	383	431	1 410	406	4 651	280	604	[illegible]

Table P-2. General Characteristics of White Persons: 1980—Con.

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts [400 or More White Persons and 400 or More of a Specified Racial Group]

Census Tracts	Jefferson Parish—Con.		Orleans Parish		St. Bernard Parish					St. Tammany Parish		
	Westwego city	Remainder	Total	New Orleans city	Total	Arabi (CDP)	Chalmette (CDP)	Violet (CDP)	Remainder	Total	Slidell city	Remainder
AGE												
Total persons	**11 039**	**26 884**	**236 987**	**236 987**	**60 868**	**10 129**	**33 407**	**9 722**	**7 610**	**95 921**	**24 107**	**71 814**
Under 5 years	903	2 889	10 834	10 834	4 893	414	2 780	986	713	8 134	2 022	6 112
5 to 9 years	788	2 610	10 175	10 175	4 815	414	2 662	1 028	711	8 501	2 303	6 198
10 to 14 years	892	2 536	11 902	11 902	5 217	627	2 797	1 018	775	8 916	2 417	6 499
15 to 19 years	1 079	2 622	17 156	17 156	5 871	1 012	3 138	913	808	8 924	2 265	6 659
20 to 24 years	1 210	2 599	24 850	24 850	5 772	943	3 209	885	735	6 953	1 501	5 452
25 to 34 years	1 640	5 376	43 112	43 112	10 060	1 078	5 941	1 881	1 160	16 874	4 420	12 454
35 to 44 years	1 129	3 443	23 657	23 657	6 834	827	3 906	1 194	907	12 953	3 622	9 331
45 to 54 years	1 186	2 306	25 058	25 058	7 082	1 789	3 696	830	767	9 920	2 484	7 436
55 to 64 years	1 083	1 538	29 594	29 594	5 914	1 616	3 183	579	536	7 704	1 804	5 900
65 to 74 years	782	708	23 705	23 705	3 016	881	1 500	296	339	4 545	742	3 803
75 years and over	347	257	16 944	16 944	1 394	528	595	112	159	2 497	527	1 970
3 and 4 years	325	1 082	3 996	3 996	1 971	164	1 110	408	289	3 207	831	2 376
16 years and over	8 248	18 275	201 187	201 187	44 728	8 488	24 522	6 479	5 239	68 353	16 839	51 514
18 years and over	7 831	17 143	195 091	195 091	42 285	8 067	23 229	6 084	4 905	64 478	15 821	48 657
21 years and over	7 105	15 736	182 234	182 234	38 922	7 465	21 376	5 614	4 467	60 072	14 796	45 276
60 years and over	1 595	1 598	54 258	54 258	6 711	2 032	3 348	601	730	10 371	1 974	8 397
62 years and over	1 390	1 316	48 467	48 467	5 700	1 741	2 819	517	623	8 896	1 643	7 253
Median	28.7	25.3	35.2	35.2	28.6	42.5	28.4	25.1	25.5	29.0	28.9	29.1
Female	**5 696**	**13 299**	**123 673**	**123 673**	**31 239**	**5 352**	**17 162**	**4 898**	**3 827**	**47 978**	**12 111**	**35 867**
Under 5 years	433	1 398	5 191	5 191	2 329	199	1 353	438	339	4 000	969	3 031
5 to 9 years	379	1 211	5 007	5 007	2 380	199	1 322	511	348	4 154	1 143	3 011
10 to 14 years	462	1 268	5 958	5 958	2 578	317	1 377	489	395	4 270	1 171	3 099
15 to 19 years	566	1 350	8 485	8 485	2 909	492	1 573	465	379	4 311	1 088	3 223
20 to 24 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25 to 34 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	957	585	[illegible]	[illegible]	[illegible]
35 to 44 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
45 to 54 years	[illegible]	[illegible]	[illegible]	[illegible]	3 748	978	[illegible]	435	376	[illegible]	[illegible]	[illegible]
55 to 64 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
65 to 74 years	471	369	14 510	14 510	1 723	507	844	178	194	2 500	434	2 066
75 years and over	218	169	11 879	11 879	950	384	399	68	99	1 559	366	1 193
3 and 4 years	160	537	1 929	1 929	944	76	541	200	127	1 564	398	1 166
16 years and over	4 316	9 132	106 082	106 082	23 372	4 548	12 799	3 359	2 666	34 607	8 573	26 034
18 years and over	4 092	8 546	102 973	102 973	22 172	4 338	12 165	3 152	2 517	32 715	8 087	24 628
21 years and over	3 719	7 829	96 685	96 685	20 453	4 054	11 201	2 909	2 289	30 610	7 606	23 004
60 years and over	935	856	33 852	33 852	3 887	1 222	1 901	348	416	5 728	1 138	4 590
62 years and over	823	721	30 776	30 776	3 359	1 073	1 632	303	351	4 989	988	4 001
Median	30.1	25.3	39.1	39.1	29.6	45.5	29.1	25.7	26.1	29.4	29.3	29.4
HOUSEHOLD TYPE AND RELATIONSHIP												
Total persons	**11 039**	**26 884**	**236 987**	**236 987**	**60 868**	**10 129**	**33 407**	**9 722**	**7 610**	**95 921**	**24 107**	**71 814**
In households	11 035	26 802	228 043	228 043	60 591	9 957	33 371	9 711	7 552	94 704	23 911	70 793
Householder	3 980	8 207	103 700	103 700	19 764	3 554	11 036	2 883	2 291	31 432	7 577	23 855
Family householder	3 077	7 164	59 012	59 012	16 830	2 900	9 377	2 549	2 004	25 942	6 564	19 378
Nonfamily householder	903	1 043	44 688	44 688	2 934	654	1 659	334	287	5 490	1 013	4 477
Living alone	798	893	38 169	38 169	2 594	610	1 436	287	261	4 792	868	3 924
Spouse	2 509	6 389	46 513	46 513	14 434	2 417	8 062	2 202	1 753	23 201	5 899	17 302
Other relatives	4 319	11 755	67 807	67 807	25 617	3 889	13 814	4 495	3 419	38 538	10 105	28 433
Nonrelatives	227	451	10 023	10 023	776	97	459	131	89	1 533	330	1 203
Inmate of institution	1	17	2 944	2 944	275	172	36	9	58	1 011	196	815
Other, in group quarters	3	65	6 000	6 000	2	–	–	2	–	206	–	206
Persons per household	2.77	3.27	2.20	2.20	3.06	2.80	3.02	3.37	3.29	3.02	3.17	2.97
Persons per family	3.22	3.54	2.94	2.94	3.38	3.18	3.33	3.63	3.58	3.38	3.45	3.36
Persons 65 years and over	**1 129**	**965**	**40 649**	**40 649**	**4 410**	**1 409**	**2 095**	**408**	**498**	**7 042**	**1 269**	**5 773**
In households	1 129	965	38 765	38 765	4 209	1 252	2 095	408	454	6 586	1 096	5 490
Householder	739	597	26 558	26 558	2 458	727	1 231	230	270	4 204	657	3 547
Nonfamily householder	304	231	13 876	13 876	926	276	442	96	112	1 741	271	1 470
Living alone	290	223	13 406	13 406	892	270	422	91	109	1 691	264	1 427
Spouse	267	190	6 957	6 957	829	246	419	71	93	1 491	241	1 250
Other relatives	115	167	4 668	4 668	881	271	423	105	82	828	191	637
Nonrelatives	8	11	582	582	41	8	22	2	9	63	7	56
Inmate of institution	–	–	1 622	1 622	201	157	–	–	44	419	173	246
Other, in group quarters	–	–	262	262	–	–	–	–	–	37	–	37
FAMILY TYPE BY PRESENCE OF OWN CHILDREN												
Families	**3 077**	**7 164**	**59 012**	**59 012**	**16 830**	**2 900**	**9 377**	**2 549**	**2 004**	**25 942**	**6 564**	**19 378**
With own children under 18 years	1 580	4 661	21 725	21 725	9 271	1 102	5 206	1 702	1 261	15 062	4 117	10 945
Number of own children under 18 years	2 830	8 975	38 384	38 384	17 241	1 885	9 501	3 373	2 482	29 170	7 882	21 288
Married-couple families	**2 511**	**6 415**	**46 509**	**46 509**	**14 437**	**2 420**	**8 063**	**2 204**	**1 750**	**23 267**	**5 927**	**17 340**
With own children under 18 years	1 281	4 200	17 430	17 430	8 031	949	4 465	1 490	1 127	13 552	3 724	9 828
Number of own children under 18 years	2 359	8 098	31 681	31 681	15 155	1 653	8 275	2 996	2 231	26 510	7 215	19 295
Female householder, no husband present	**466**	**541**	**9 685**	**9 685**	**1 905**	**373**	**1 084**	**262**	**186**	**1 981**	**493**	**1 488**
With own children under 18 years	258	364	3 652	3 652	1 069	127	664	174	104	1 180	315	865
Number of own children under 18 years	412	683	5 782	5 782	1 813	196	1 107	310	200	2 111	537	1 574
MARITAL STATUS												
Male, 15 years and over	**4 034**	**9 427**	**96 559**	**96 559**	**21 991**	**4 037**	**12 058**	**3 230**	**2 666**	**34 816**	**8 537**	**26 279**
Single	950	2 085	34 800	34 800	5 320	1 156	2 817	699	648	8 014	1 924	6 090
Now married, except separated	2 616	6 645	49 141	49 141	14 936	2 520	8 317	2 278	1 821	23 971	6 055	17 916
Separated	134	209	2 798	2 798	516	77	282	92	65	701	141	560
Widowed	109	134	3 423	3 423	464	133	214	57	60	704	139	565
Divorced	225	354	6 397	6 397	755	151	428	104	72	1 426	278	1 148
Female, 15 years and over	**4 422**	**9 422**	**107 517**	**107 517**	**23 952**	**4 637**	**13 110**	**3 460**	**2 745**	**35 554**	**8 828**	**26 726**
Single	726	1 549	28 230	28 230	4 309	954	2 329	581	445	5 891	1 482	4 409
Now married, except separated	2 609	6 593	48 575	48 575	14 934	2 530	8 304	2 283	1 817	23 857	6 022	17 835
Separated	179	260	3 092	3 092	720	113	397	137	73	853	209	644
Widowed	604	611	19 476	19 476	2 707	800	1 324	270	313	3 295	750	2 545
Divorced	304	409	8 144	8 144	1 282	240	756	189	97	1 658	365	1 293

Table P-3. **General Characteristics of Black Persons: 1980**

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts [400 or More Black Persons]

	The SMSA	Jefferson Parish										
		Total	Estelle (CDP)	Gretna city	Harahan city	Harvey (CDP)	Jefferson (CDP)	Kenner city	Marrero (CDP)	Metairie (CDP)	River Ridge (CDP)	Terrytown (CDP)	Timberlane (CDP)
AGE													
Total persons	387 422	63 001	704	5 792	32	6 048	2 315	9 369	14 580	7 215	2 131	1 141	895
Under 5 years	40 729	7 433	136	643	6	846	232	1 108	1 647	778	301	138	110
5 to 9 years	39 365	6 841	122	589	5	644	179	1 010	1 670	689	231	130	109
10 to 14 years	39 786	6 955	73	479	–	543	213	1 098	1 855	614	214	106	95
15 to 19 years	42 627	7 362	30	605	3	559	308	1 018	1 964	672	257	78	81
20 to 24 years	39 266	6 756	49	724	8	846	227	916	1 334	918	251	165	98
25 to 34 years	63 543	11 062	189	900	6	1 215	370	1 764	2 335	1 471	314	370	243
35 to 44 years	37 548	6 168	55	484	1	465	221	991	1 489	591	165	101	98
45 to 54 years	30 530	4 281	26	418	2	398	167	611	1 056	538	155	33	28
55 to 64 years	25 789	3 240	10	472	1	298	174	451	703	452	129	13	23
65 to 74 years	18 270	1 909	4	298	–	150	127	284	375	334	72	4	9
75 years and over	9 969	994	10	180	–	84	97	118	152	158	42	3	1
3 and 4 years	15 823	2 788	47	259	2	311	81	427	609	292	121	43	40
16 years and over	258 795	40 219	366	3 964	20	3 912	1 650	5 912	8 970	5 003	1 340	750	556
18 years and over	241 472	37 145	348	3 717	19	3 695	1 528	5 504	8 147	4 737	1 226	717	526
21 years and over	216 737	33 035	340	3 332	16	3 304	1 333	4 952	7 142	4 305	1 086	664	481
60 years and over	39 661	4 300	15	694	–	339	301	613	815	708	175	12	14
62 years and over	34 668	3 672	15	600	–	280	268	519	702	603	150	9	12
Median	23.9	22.2	17.5	24.0	21.5	22.7	25.0	22.6	20.5	24.7	21.5	24.1	22.8
Female	207 760	32 574	361	2 937	22	3 076	1 195	4 885	7 730	3 730	1 082	576	443
Under 5 years	20 317	3 702	68	327	4	413	110	557	849	369	142	67	57
5 to 9 years	19 701	3 408	60	281	4	298	97	530	859	351	92	67	55
10 to 14 years	19 897	3 416	32	209	–	276	100	555	943	295	107	55	48
15 to 19 years	21 908	3 710	13	280	3	301	166	501	979	349	131	40	40
20 to 24 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25 to 34 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35 to 44 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
45 to 54 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
55 to 64 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
65 to 74 years	10 594	1 041	3	177	–	80	75	150	193	187	40	3	5
75 years and over	6 325	574	6	110	–	48	46	71	87	95	17	1	–
3 and 4 years	7 827	1 381	17	126	2	156	36	226	309	142	63	22	17
16 years and over	143 379	21 282	198	2 062	13	2 035	870	3 124	4 861	2 646	721	380	269
18 years and over	134 605	19 734	191	1 943	12	1 913	804	2 923	4 463	2 510	660	366	257
21 years and over	121 470	17 625	186	1 769	10	1 699	694	2 651	3 949	2 283	582	334	232
60 years and over	23 285	2 324	9	393	–	182	158	333	427	388	93	5	7
62 years and over	20 544	2 015	9	351	–	151	144	281	368	339	80	5	6
Median	25.2	22.9	22.5	25.5	19.5	22.9	25.0	23.0	21.5	25.0	22.8	23.6	22.1
HOUSEHOLD TYPE AND RELATIONSHIP													
Total persons	387 422	63 001	704	5 792	32	6 048	2 315	9 369	14 580	7 215	2 131	1 141	895
In households	382 394	62 550	704	5 586	31	6 022	2 292	9 320	14 534	7 206	2 130	1 141	895
Householder	121 627	17 687	185	1 865	10	1 831	735	2 606	3 677	2 397	613	403	268
Family householder	89 282	14 136	167	1 321	9	1 413	514	2 130	3 197	1 670	507	294	215
Nonfamily householder	32 345	3 551	18	544	1	418	221	476	480	727	106	109	53
Living alone	28 824	2 972	17	470	1	316	192	390	432	600	92	82	47
Spouse	48 188	8 873	125	663	4	894	302	1 415	2 023	1 019	273	197	183
Other relatives	202 578	34 257	381	2 841	15	3 034	1 168	5 039	8 638	3 490	1 190	481	415
Nonrelatives	10 001	1 733	13	217	2	263	87	260	196	300	54	60	29
Inmate of institution	2 974	412	–	206	1	26	22	17	46	9	1	–	–
Other, in group quarters	2 054	39	–	–	–	–	1	32	–	–	–	–	–
Persons per household	3.14	3.54	3.85	2.98	3.10	3.30	3.12	3.58	3.95	3.00	3.47	2.84	3.35
Persons per family	3.81	4.05	4.08	3.64	3.11	3.79	3.86	4.03	4.33	3.70	3.89	3.32	3.80
Persons 65 years and over	28 239	2 903	14	478	–	234	224	402	527	492	114	7	10
In households	27 731	2 848	14	478	–	220	211	391	517	485	114	7	10
Householder	19 214	1 868	9	346	–	148	132	261	332	311	78	2	3
Nonfamily householder	9 028	684	6	158	–	47	51	95	115	102	28	–	–
Living alone	8 493	630	6	151	–	44	41	83	105	95	27	–	–
Spouse	4 045	432	1	62	–	35	40	64	75	74	20	2	2
Other relatives	3 794	475	4	54	–	36	31	51	103	84	13	3	5
Nonrelatives	678	73	–	16	–	1	8	15	7	16	3	–	–
Inmate of institution	442	55	–	–	–	14	13	11	10	7	–	–	–
Other, in group quarters	66	–	–	–	–	–	–	–	–	–	–	–	–
FAMILY TYPE BY PRESENCE OF OWN CHILDREN													
Families	89 282	14 136	167	1 321	9	1 413	514	2 130	3 197	1 670	507	294	215
With own children under 18 years	56 025	9 667	149	795	6	980	286	1 486	2 294	968	326	218	164
Number of own children under 18 years	123 364	21 951	327	1 728	12	1 999	638	3 338	5 522	1 990	777	387	342
Married-couple families	48 296	8 918	127	664	4	897	300	1 428	2 024	1 030	276	199	185
With own children under 18 years	28 889	6 045	114	376	1	598	168	1 005	1 436	589	155	137	142
Number of own children under 18 years	61 910	13 424	240	804	4	1 195	363	2 190	3 329	1 199	326	235	305
Female householder, no husband present	35 651	4 350	31	571	4	427	157	571	1 010	507	200	78	22
With own children under 18 years	24 867	3 173	28	381	4	334	94	411	772	322	151	73	16
Number of own children under 18 years	57 301	7 649	71	860	6	733	235	1 001	2 016	683	402	142	27
MARITAL STATUS													
Male, 15 years and over	119 697	19 724	172	1 961	7	1 926	803	2 910	4 329	2 419	644	380	298
Single	47 689	7 370	31	823	3	657	299	1 011	1 666	888	259	115	79
Now married, except separated	52 174	9 599	128	759	4	982	342	1 521	2 161	1 113	297	206	192
Separated	8 310	1 181	5	157	–	150	50	158	210	170	29	27	13
Widowed	4 546	547	5	81	–	40	45	84	112	75	23	2	2
Divorced	6 978	1 027	3	141	–	97	67	136	180	173	36	30	12
Female, 15 years and over	147 845	22 048	201	2 120	14	2 089	888	3 243	5 079	2 715	761	387	283
Single	49 679	6 965	31	678	5	593	299	971	1 673	865	263	94	63
Now married, except separated	52 026	9 470	128	715	4	961	326	1 484	2 159	1 102	292	205	190
Separated	15 060	1 910	12	223	2	210	75	296	424	247	70	38	11
Widowed	18 283	2 050	14	309	1	172	105	283	427	302	60	12	10
Divorced	12 797	1 653	16	195	2	153	83	209	396	199	56	38	9

Table P-3. **General Characteristics of Black Persons: 1980**—Con.

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts
[400 or More Black Persons]

	Jefferson Parish—Con.		Orleans Parish		St. Bernard Parish					St. Tammany Parish		
	Westwego city	Remainder	Total	New Orleans city	Total	Arabi (CDP)	Chalmette (CDP)	Violet (CDP)	Remainder	Total	Slidell city	Remain
AGE												
Total persons	**1 466**	**11 313**	**308 149**	**308 149**	**2 611**	**14**	**47**	**1 787**	**563**	**13 861**	**2 318**	**11 5**
Under 5 years	171	1 317	31 642	31 642	212	...	1	157	54	1 442	233	1 2
5 to 9 years	167	1 296	30 984	30 984	233	...	2	167	64	1 307	238	1 0
10 to 14 years	170	1 495	30 995	30 995	264	...	–	200	64	1 572	283	1 2
15 to 19 years	196	1 591	33 302	33 302	325	...	8	254	60	1 638	256	1 3
20 to 24 years	154	1 066	30 979	30 979	254	...	7	187	59	1 277	197	1 0
25 to 34 years	185	1 700	50 145	50 145	347	...	13	241	89	1 989	379	1 6
35 to 44 years	117	1 390	29 777	29 777	236	...	3	178	55	1 367	227	1 1
45 to 54 years	88	761	24 899	24 899	212	...	5	166	40	1 138	187	9
55 to 64 years	92	422	21 459	21 459	166	...	2	124	38	924	140	7
65 to 74 years	76	176	15 464	15 464	97	...	5	65	27	800	129	6
75 years and over	50	99	8 503	8 503	65	...	1	48	13	407	49	3
3 and 4 years	64	492	12 392	12 392	90	...	1	64	25	553	91	4
16 years and over	924	6 852	207 775	207 775	1 627	...	43	1 204	366	9 174	1 508	7 6
18 years and over	828	6 153	194 326	194 326	1 508	...	41	1 108	346	8 493	1 404	7 0
21 years and over	721	5 359	174 760	174 760	1 319	...	33	967	308	7 623	1 267	6 3
60 years and over	169	445	33 486	33 486	232	...	8	165	55	1 643	239	1 4
62 years and over	155	359	29 365	29 365	207	...	8	149	46	1 424	208	1 2
Median	20.7	19.8	24.4	24.4	23.1	...	27.9	22.7	23.5	23.7	23.8	23
Female	**771**	**5 766**	**166 648**	**166 648**	**1 275**	...	**18**	**948**	**300**	**7 263**	**1 232**	**6 0**
Under 5 years	87	652	15 802	15 802	112	...	–	83	29	701	115	5
5 to 9 years	79	635	15 502	15 502	120	...	2	81	37	671	127	5
10 to 14 years	91	705	15 599	15 599	137	...	–	106	31	745	148	5
15 to 19 years	87	820	17 230	17 230	160	...	3	123	32	808	122	6
20 to 24 years	83	570	16 947	16 947	118	...	1	89	28	440	94	5
25 to 34 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35 to 44 years	[illegible]	[illegible]	16 940	16 940	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	218	8
45 to 54 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	750	115	5
55 to 64 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	631	109	5
65 to 74 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
75 years and over	49	311	12 049	12 049	62	...	3	42	17	460	67	3
	46	80	9 031	2 031	42	...	–	32	8	238	30	2
	33	60	5 471	5 471								
3 and 4 years	33	232	6 135	6 135	50	...	–	33	17	261	46	2
16 years and over	503	3 600	116 272	116 272	866	...	15	648	194	4 959	811	4 1
18 years and over	465	3 227	109 439	109 439	809	...	13	605	183	4 623	760	3 8
21 years and over	408	2 828	98 954	98 954	715	...	12	532	164	4 176	698	3 4
60 years and over	106	223	19 887	19 887	141	...	5	101	32	933	130	8
62 years and over	99	182	17 579	17 579	127	...	5	92	27	823	114	7
Median	22.0	20.6	25.6	25.6	24.5	...	35.0	24.3	24.1	25.3	25.3	25
HOUSEHOLD TYPE AND RELATIONSHIP												
Total persons	**1 466**	**11 313**	**308 149**	**308 149**	**2 611**	**14**	**47**	**1 787**	**563**	**13 861**	**2 318**	**11 54**
In households	1 465	11 224	303 889	303 889	2 371	...	29	1 775	557	13 584	2 302	11 28
Householder	421	2 676	99 347	99 347	591	...	10	447	132	4 002	654	3 34
Family householder	305	2 394	71 491	71 491	500	...	7	378	114	3 155	535	2 62
Nonfamily householder	116	282	27 856	27 856	91	...	3	69	18	847	119	72
Living alone	99	234	25 020	25 020	83	...	3	62	17	749	103	64
Spouse	132	1 643	36 984	36 984	330	...	5	244	80	2 001	335	1 66
Other relatives	861	6 704	159 623	159 623	1 422	...	13	1 063	340	7 276	1 246	6 03
Nonrelatives	51	201	7 935	7 935	28	...	1	21	5	305	67	23
Inmate of institution	1	83	2 269	2 269	28	...	18	–	6	265	16	24
Other, in group quarters	–	6	1 991	1 991	12	...	–	12	–	12	–	1
Persons per household	3.45	4.21	3.06	3.06	3.99	...	2.70	3.95	4.20	3.40	3.50	3.3
Persons per family	4.22	4.50	3.75	3.75	4.48	...	3.43	4.44	4.67	3.94	3.93	3.9
Persons 65 years and over	**126**	**275**	**23 967**	**23 967**	**162**	...	**6**	**113**	**40**	**1 207**	**178**	**1 02**
In households	126	275	23 584	23 584	152	...	6	111	34	1 147	168	97
Householder	92	154	16 444	16 444	95	...	5	70	19	807	124	68
Nonfamily householder	39	43	7 993	7 993	34	...	2	24	7	317	47	27
Living alone	36	42	7 528	7 528	32	...	2	22	7	303	45	25
Spouse	15	38	3 375	3 375	28	...	1	19	8	210	27	18
Other relatives	11	80	3 184	3 184	26	...	–	19	7	109	14	9
Nonrelatives	4	3	581	581	3	...	–	3	–	21	3	1
Inmate of institution	–	–	319	319	8	...	–	–	6	60	10	5
Other, in group quarters	–	–	64	64	2	...	–	2	–	–	–	
FAMILY TYPE BY PRESENCE OF OWN CHILDREN												
Families	**305**	**2 394**	**71 491**	**71 491**	**500**	...	**7**	**378**	**114**	**3 155**	**535**	**2 62**
With own children under 18 years	196	1 799	44 143	44 143	299	...	2	229	67	1 916	345	1 57
Number of own children under 18 years	529	4 362	96 360	96 360	720	...	4	553	162	4 333	785	3 54
Married-couple families	**130**	**1 654**	**37 038**	**37 038**	**327**	...	**4**	**244**	**79**	**2 013**	**334**	**1 67**
With own children under 18 years	71	1 253	21 417	21 417	198	...	2	149	47	1 229	222	1 00
Number of own children under 18 years	195	3 039	45 274	45 274	457	...	4	336	117	2 755	512	2 24
Female householder, no husband present	**161**	**611**	**30 205**	**30 205**	**145**	...	**1**	**114**	**30**	**951**	**165**	**78**
With own children under 18 years	116	471	21 003	21 003	90	...	–	72	18	601	107	49
Number of own children under 18 years	320	1 153	47 993	47 993	234	...	–	196	38	1 425	250	1 17
MARITAL STATUS												
Male, 15 years and over	**444**	**3 431**	**94 783**	**94 783**	**796**	...	**28**	**585**	**178**	**4 394**	**722**	**3 67**
Single	220	1 319	38 336	38 336	349	...	15	261	71	1 634	271	1 36
Now married, except separated	150	1 744	40 039	40 039	360	...	9	260	89	2 176	355	1 82
Separated	28	184	6 869	6 869	36	...	1	26	9	224	37	18
Widowed	14	64	3 789	3 789	28	...	2	21	4	182	31	15
Divorced	32	120	5 750	5 750	23	...	1	17	5	178	28	15
Female, 15 years and over	**514**	**3 774**	**119 745**	**119 745**	**906**	...	**16**	**678**	**203**	**5 146**	**842**	**4 30**
Single	166	1 264	40 822	40 822	321	...	6	250	61	1 571	234	1 33
Now married, except separated	153	1 751	40 031	40 031	363	...	6	261	95	2 162	364	1 79
Separated	68	234	12 718	12 718	65	...	–	53	12	367	69	29
Widowed	74	281	15 400	15 400	114	...	3	86	22	719	105	61
Divorced	53	244	10 774	10 774	43	...	1	28	13	327	70	25

Table P-1. General Characteristics of Persons: 1980

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts

	The SMSA	Jefferson Parish										
		Total	Estelle (CDP)	Gretna city	Harahan city	Harvey (CDP)	Jefferson (CDP)	Kenner city	Marrero (CDP)	Metairie (CDP)	River Ridge (CDP)	Terrytown (CDP)
AGE												
Total persons	1 187 073	454 592	12 724	20 615	11 384	22 709	15 550	66 382	36 548	164 160	17 146	23 548
Under 5 years	96 530	37 737	1 693	1 616	744	2 450	860	6 845	3 476	10 420	1 207	1 949
5 to 9 years	94 345	36 918	1 633	1 416	763	2 032	702	6 414	3 506	10 864	1 259	2 071
10 to 14 years	99 612	39 321	1 342	1 417	816	1 866	796	6 436	3 809	12 565	1 408	2 250
15 to 19 years	111 191	42 553	1 028	1 945	1 072	2 018	1 211	5 999	4 111	14 270	1 714	2 449
20 to 24 years	116 323	44 670	1 110	2 342	1 076	2 808	1 579	6 350	3 209	16 023	1 580	2 503
25 to 34 years	210 413	85 307	3 005	3 084	1 801	4 629	2 447	14 873	5 987	30 419	2 729	4 686
35 to 44 years	131 221	54 902	1 557	2 042	1 200	2 510	1 298	8 294	4 211	20 197	2 084	3 409
45 to 54 years	114 080	44 549	779	2 335	1 475	1 790	1 470	5 281	3 473	18 148	2 214	2 222
55 to 64 years	103 249	36 753	374	2 274	1 386	1 340	2 320	3 390	2 513	16 453	1 733	1 231
65 to 74 years	69 315	21 204	146	1 442	719	795	1 766	1 715	1 462	9 821	827	543
75 years and over	40 794	10 678	57	702	332	471	1 101	785	791	4 980	391	235
3 and 4 years	37 259	14 414	718	614	276	908	313	2 582	1 340	3 970	488	760
16 years and over	874 210	331 843	7 798	15 816	8 865	15 964	12 993	45 437	24 857	127 439	12 903	16 749
18 years and over	829 508	314 334	7 373	15 066	8 412	15 200	12 516	42 987	23 154	121 599	12 158	15 741
21 years and over	762 446	289 463	6 852	13 735	7 763	13 815	11 680	39 592	20 959	113 048	11 255	14 301
60 years and over	155 291	47 499	350	3 153	1 659	1 820	3 954	3 865	3 299	21 893	1 906	1 247
62 years and over	135 636	40 632	282	2 729	1 378	1 559	3 467	3 280	2 862	18 800	1 599	1 026
Median	28.2	27.8	23.4	29.3	31.7	25.3	36.1	25.8	25.2	30.6	29.9	26.2
Female	617 094	232 045	6 397	10 444	5 803	11 299	8 121	33 573	18 876	85 104	8 565	11 824
Under 5 years	47 453	18 507	863	833	344	1 214	419	3 369	1 740	5 087	568	929
5 to 9 years	46 537	18 022	811	699	352	953	349	3 163	1 727	5 357	584	1 018
10 to 14 years	49 349	19 379	654	668	404	890	387	3 193	1 857	6 232	686	1 115
15 to 19 years	55 976	21 409	521	926	552	1 070	607	2 947	2 046	7 170	843	1 284
[illegible]	107 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
65 to 74 years	40 843	12 303	88	854	399	469	1 031	997	849	5 729	470	347
75 years and over	27 307	7 015	34	468	215	291	722	507	522	3 338	232	153
3 and 4 years	18 233	7 038	352	309	124	459	145	1 299	660	1 909	232	363
16 years and over	462 579	171 770	3 935	8 063	4 589	8 049	6 887	23 263	13 115	66 943	6 549	8 497
18 years and over	440 136	162 987	3 721	7 714	4 379	7 634	6 653	22 074	12 269	64 012	6 172	7 977
21 years and over	405 878	150 313	3 459	7 082	4 039	6 893	6 207	20 331	11 160	59 698	5 722	7 202
60 years and over	92 601	27 619	191	1 869	911	1 050	2 363	2 226	1 919	12 915	1 041	723
62 years and over	82 239	24 099	161	1 646	776	925	2 094	1 919	1 700	11 306	894	614
Median	29.2	28.4	23.3	31.1	33.1	25.4	40.5	26.0	25.9	31.6	31.1	26.3
HOUSEHOLD TYPE AND RELATIONSHIP												
Total persons	1 187 073	454 592	12 724	20 615	11 384	22 709	15 550	66 382	36 548	164 160	17 146	23 548
In households	1 169 087	452 196	12 724	20 195	11 383	22 488	15 048	66 145	36 232	163 694	17 094	23 548
Householder	418 406	155 685	3 515	7 675	3 910	7 633	6 542	20 887	10 961	61 721	5 838	7 823
Family householder	298 935	119 152	3 256	5 377	3 255	5 778	4 130	17 123	9 124	44 077	4 610	6 162
Nonfamily householder	119 471	36 533	259	2 298	655	1 855	2 412	3 764	1 837	17 644	1 228	1 661
Living alone	102 986	30 745	212	1 983	560	1 467	2 136	3 010	1 656	14 948	1 039	1 266
Spouse	224 728	98 919	2 893	3 947	2 840	4 616	3 196	14 364	7 233	37 026	3 936	5 202
Other relatives	493 809	186 629	6 129	7 925	4 443	9 413	4 872	29 275	17 477	60 693	6 990	9 814
Nonrelatives	32 144	10 963	187	648	190	826	438	1 619	561	4 254	330	709
Inmate of institution	9 021	2 131	–	420	1	221	427	200	297	411	52	–
Other, in group quarters	8 965	265	–	–	–	–	75	37	19	55	–	–
Persons per household	2.79	2.90	3.62	2.63	2.91	2.95	2.30	3.17	3.31	2.65	2.93	3.01
Persons per family	3.40	3.40	3.77	3.21	3.24	3.43	2.95	3.55	3.71	3.22	3.37	3.44
Persons 65 years and over	110 109	31 882	203	2 144	1 051	1 266	2 867	2 500	2 253	14 801	1 218	778
In households	106 026	30 817	203	2 144	1 051	1 091	2 675	2 326	2 130	14 409	1 209	778
Householder	69 914	18 886	96	1 457	620	678	1 758	1 284	1 399	8 778	687	400
Nonfamily householder	32 621	7 540	30	659	210	262	790	465	632	3 456	233	143
Living alone	31 297	7 266	30	636	202	252	756	443	610	3 337	229	137
Spouse	19 292	6 306	35	408	241	229	556	420	409	3 023	271	149
Other relatives	15 105	5 232	68	237	184	174	326	576	293	2 436	236	226
Nonrelatives	1 715	393	4	42	6	10	35	46	29	172	15	3
Inmate of institution	3 685	1 044	–	–	–	175	189	174	123	374	9	–
Other, in group quarters	398	21	–	–	–	–	3	–	–	18	–	–
FAMILY TYPE BY PRESENCE OF OWN CHILDREN												
Families	298 935	119 152	3 256	5 377	3 255	5 778	4 130	17 123	9 124	44 077	4 610	6 162
With own children under 18 years	160 909	66 605	2 465	2 545	1 542	3 524	1 402	11 119	5 680	21 588	2 358	3 910
Number of own children under 18 years	319 593	128 666	5 010	4 813	2 765	6 771	2 538	21 678	11 843	39 955	4 644	7 275
Married-couple families	224 728	98 919	2 893	3 947	2 840	4 616	3 196	14 364	7 233	37 026	3 936	5 202
With own children under 18 years	118 501	55 119	2 194	1 779	1 351	2 765	1 051	9 310	4 417	18 175	1 976	3 291
Number of own children under 18 years	232 809	106 909	4 450	3 322	2 465	5 334	1 924	18 178	8 909	34 301	3 807	6 267
Female householder, no husband present	61 350	16 007	273	1 165	330	910	687	2 203	1 563	5 567	522	733
With own children under 18 years	37 623	9 733	218	660	162	639	283	1 541	1 099	2 886	317	526
Number of own children under 18 years	78 698	18 797	464	1 321	254	1 259	512	3 048	2 620	4 837	706	869
MARITAL STATUS												
Male, 15 years and over	422 831	164 479	3 987	7 922	4 358	8 119	6 226	22 839	12 205	61 883	6 545	8 516
Single	136 110	45 690	776	2 512	1 132	2 278	1 866	5 860	3 497	17 719	1 905	2 375
Now married, except separated	235 770	102 590	2 954	4 220	2 928	4 869	3 383	14 832	7 557	38 172	4 087	5 365
Separated	16 171	4 846	83	362	78	377	222	693	396	1 610	145	233
Widowed	11 917	3 208	44	242	87	144	277	306	268	1 255	126	96
Divorced	22 863	8 145	130	586	133	451	478	1 148	487	3 127	282	447
Female, 15 years and over	473 755	176 137	4 069	8 244	4 703	8 242	6 966	23 848	13 552	68 428	6 727	8 762
Single	120 425	37 923	604	1 808	886	1 646	1 496	4 717	3 116	15 679	1 521	1 904
Now married, except separated	234 681	102 186	2 958	4 114	2 932	4 829	3 353	14 788	7 548	38 077	4 053	5 355
Separated	24 558	6 547	129	493	108	442	228	995	695	2 076	215	303
Widowed	59 853	17 710	189	1 186	502	771	1 372	1 697	1 384	7 670	601	544
Divorced	34 238	11 771	189	643	275	554	517	1 651	809	4 926	337	656

Table P-1. **General Characteristics of Persons: 1980**—Con.

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts	Jefferson Parish—Con.			Orleans Parish		St. Bernard Parish					St. Tammany Parish		
	Timberlane (CDP)	Westwego city	Remainder	Total	New Orleans city	Total	Arabi (CDP)	Chalmette (CDP)	Violet (CDP)	Remainder	Total	Slidell city	Remainder
AGE													
Total persons	11 579	12 663	39 584	557 515	557 515	66 097	10 248	33 847	11 678	8 324	110 869	26 718	84 151
Under 5 years	980	1 089	4 408	43 939	43 939	5 169	416	2 806	1 160	787	9 685	2 287	7 398
5 to 9 years	1 210	970	4 078	42 394	42 394	5 114	422	2 693	1 213	786	9 919	2 578	7 341
10 to 14 years	1 363	1 077	4 176	44 122	44 122	5 556	635	2 837	1 232	852	10 613	2 735	7 878
15 to 19 years	1 104	1 288	4 344	51 676	51 676	6 290	1 024	3 198	1 179	889	10 672	2 547	8 125
20 to 24 years	919	1 386	3 785	57 223	57 223	6 112	961	3 258	1 086	807	8 318	1 722	6 596
25 to 34 years	2 452	1 854	7 341	95 477	95 477	10 562	1 100	6 033	2 159	1 270	19 067	4 854	14 213
35 to 44 years	1 842	1 262	4 996	54 675	54 675	7 168	838	3 961	1 387	982	14 476	3 899	10 577
45 to 54 years	920	1 288	3 154	50 998	50 998	7 385	1 803	3 749	1 012	821	11 148	2 690	8 458
55 to 64 years	538	1 183	2 018	51 688	51 688	6 126	1 631	3 198	714	583	8 682	1 955	6 727
65 to 74 years	186	866	916	39 601	39 601	3 139	886	1 515	369	369	5 371	874	4 497
75 years and over	65	400	368	25 722	25 722	1 476	532	599	167	178	2 918	577	2 341
3 and 4 years	393	396	1 656	16 957	16 957	2 086	166	1 121	477	322	3 802	936	2 866
16 years and over	7 772	9 284	25 966	417 183	417 183	46 948	8 588	24 852	7 801	5 707	78 236	18 529	59 707
18 years and over	7 283	8 766	24 079	397 183	397 183	44 352	8 162	23 540	7 306	5 344	73 639	17 396	56 243
21 years and over	6 737	7 921	21 805	363 927	363 927	40 745	7 554	21 647	6 687	4 857	68 311	16 220	52 091
60 years and over	462	1 779	2 112	88 710	88 710	7 005	2 045	3 373	788	799	12 077	2 221	9 856
62 years and over	358	1 559	1 733	78 676	78 676	5 959	1 753	2 842	683	681	10 369	1 856	8 513
Median	25.9	27.6	23.7	28.6	28.6	28.4	42.3	28.4	24.9	25.3	28.3	28.4	28.3
Female	5 773	6 543	19 723	296 327	296 327	32 897	5 430	17 372	5 921	4 194	55 825	13 514	42 311
Under 5 years	483	525	2 133	21 723	21 723	2 468	199	1 368	526	375	4 755	1 102	3 653
5 to 9 years	615	463	1 931	21 095	21 095	2 534	203	1 338	600	393	4 886	1 293	3 593
10 to 14 years	698	559	2 036	22 140	22 140	2 751	321	1 399	600	431	5 079	1 337	3 742
15 to 19 years	554	662	2 227	26 290	26 290	3 113	499	1 599	592	423	5 164	1 224	3 940
20 to 24 years	440	668	1 984	29 653	29 653	3 110	463	1 657	570	420	4 [illegible]	[illegible]	[illegible]
25 to 34 years	1 261	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35 to 44 years	[illegible]	670	2 534	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9 822	2 577	[illegible]
45 to 54 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
55 to 64 years	[illegible]	611	[illegible]	28 309	28 399	[illegible]	[illegible]	961	[illegible]	411	[illegible]	[illegible]	[illegible]
65 to 74 years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
75 years and over	44	253	236	17 490	17 490	997	386	401	102	108	1 805	397	1 408
3 and 4 years	187	195	804	8 340	8 340	1 005	76	547	236	146	1 850	453	1 397
16 years and over	3 856	4 879	13 145	226 345	226 345	24 511	4 597	12 947	4 063	2 904	39 953	9 491	30 462
18 years and over	3 605	4 613	12 164	216 199	216 199	23 241	4 383	12 306	3 813	2 739	37 709	8 948	28 761
21 years and over	3 330	4 177	11 013	199 019	199 019	21 404	4 097	11 325	3 494	2 488	35 142	8 400	26 742
60 years and over	244	1 050	1 117	54 233	54 233	4 054	1 227	1 913	458	456	6 695	1 274	5 421
62 years and over	197	930	937	48 793	48 793	3 507	1 078	1 644	401	384	5 840	1 106	4 734
Median	25.8	29.0	23.9	30.0	30.0	29.4	45.3	29.0	25.6	25.9	28.8	28.9	28.8
HOUSEHOLD TYPE AND RELATIONSHIP													
Total persons	11 579	12 663	39 584	557 515	557 515	66 097	10 248	33 847	11 678	8 324	110 869	26 718	84 151
In households	11 579	12 658	39 408	543 782	543 782	63 778	10 072	33 792	11 655	8 259	109 331	26 505	82 826
Householder	3 524	4 456	11 200	206 435	206 435	20 591	3 585	11 161	3 380	2 465	35 695	8 295	27 400
Family householder	2 993	3 426	9 841	132 927	132 927	17 536	2 929	9 482	2 971	2 154	29 320	7 160	22 160
Nonfamily householder	531	1 030	1 359	73 508	73 508	3 055	656	1 679	409	311	6 375	1 135	5 240
Living alone	406	906	1 156	63 965	63 965	2 701	612	1 451	354	284	5 575	973	4 602
Spouse	2 674	2 676	8 316	85 404	85 404	14 943	2 444	8 152	2 485	1 862	25 462	6 312	19 150
Other relatives	5 142	5 245	19 211	233 462	233 462	27 420	3 944	14 005	5 633	3 838	46 298	11 495	34 803
Nonrelatives	239	281	681	18 481	18 481	824	99	474	157	94	1 876	403	1 473
Inmate of institution	–	2	100	5 288	5 288	305	176	55	9	65	1 297	213	1 084
Other, in group quarters	–	3	76	8 445	8 445	14	–	–	14	–	241	–	241
Persons per household	3.29	2.84	3.52	2.63	2.63	3.10	2.81	3.03	3.45	3.35	3.06	3.20	3.02
Persons per family	3.61	3.31	3.80	3.40	3.40	3.42	3.18	3.34	3.73	3.65	3.45	3.49	3.43
Persons 65 years and over	251	1 266	1 284	65 322	65 323	4 615	1 418	2 114	536	547	8 289	1 451	6 838
In households	251	1 266	1 284	63 034	63 034	4 403	1 259	2 114	534	496	7 772	1 268	6 504
Householder	125	838	766	43 417	43 417	2 578	732	1 245	308	293	5 033	781	4 252
Nonfamily householder	39	345	276	22 045	22 045	968	277	447	122	122	2 068	318	1 750
Living alone	39	328	267	21 096	21 096	932	271	427	115	119	2 003	309	1 694
Spouse	41	289	235	10 419	10 419	860	247	421	90	102	1 707	268	1 439
Other relatives	80	127	269	8 007	8 007	918	272	426	128	92	948	209	739
Nonrelatives	5	12	14	1 191	1 191	47	8	22	8	9	84	10	74
Inmate of institution	–	–	–	1 951	1 951	210	159	–	–	51	480	183	297
Other, in group quarters	–	–	–	338	338	2	–	–	2	–	37	–	37
FAMILY TYPE BY PRESENCE OF OWN CHILDREN													
Families	2 993	3 426	9 841	132 927	132 927	17 536	2 929	9 482	2 971	2 154	29 320	7 160	22 160
With own children under 18 years	1 991	1 800	6 681	67 463	67 463	9 711	1 117	5 280	1 960	1 354	17 130	4 502	12 628
Number of own children under 18 years	4 071	3 401	13 902	138 866	138 866	18 207	1 909	9 621	3 980	2 697	33 854	8 774	25 080
Married-couple families	2 674	2 676	8 316	85 404	85 404	14 943	2 444	8 152	2 485	1 862	25 462	6 312	19 150
With own children under 18 years	1 788	1 372	5 650	40 129	40 129	8 351	961	4 529	1 663	1 198	14 902	3 980	10 922
Number of own children under 18 years	3 711	2 595	11 646	80 500	80 500	15 830	1 674	8 381	3 381	2 394	29 570	7 825	21 745
Female householder, no husband present	262	634	1 178	40 312	40 312	2 067	375	1 091	382	219	2 964	665	2 299
With own children under 18 years	170	378	854	24 910	24 910	1 172	128	670	250	124	1 808	427	1 381
Number of own children under 18 years	297	732	1 878	54 251	54 251	2 069	197	1 116	511	245	3 581	796	2 785
MARITAL STATUS													
Male, 15 years and over	4 049	4 531	13 299	195 691	195 691	23 114	4 088	12 244	3 878	2 904	39 547	9 336	30 211
Single	1 053	1 182	3 535	74 888	74 888	5 760	1 172	2 876	974	738	9 772	2 219	7 553
Now married, except separated	2 752	2 802	8 669	91 339	91 339	15 500	2 549	8 427	2 579	1 945	26 341	6 462	19 879
Separated	73	163	411	9 829	9 829	564	79	290	120	75	932	178	754
Widowed	39	123	201	7 318	7 318	502	137	217	80	68	889	170	719
Divorced	132	261	483	12 317	12 317	788	151	434	125	78	1 613	307	1 306
Female, 15 years and over	3 977	4 996	13 623	231 369	231 369	25 144	4 687	13 267	4 195	2 995	41 105	9 782	31 323
Single	754	900	2 892	70 290	70 290	4 687	967	2 369	835	516	7 525	1 734	5 791
Now married, except separated	2 735	2 800	8 644	90 717	90 717	15 480	2 558	8 398	2 582	1 942	26 298	6 470	19 828
Separated	111	249	503	15 978	15 978	793	115	401	192	85	1 240	280	960
Widowed	189	684	921	35 259	35 259	2 844	804	1 332	367	341	4 040	859	3 181
Divorced	188	363	663	19 125	19 125	1 340	243	767	219	111	2 002	439	1 563

Table P-9. Social Characteristics of Persons: 1980

[Data are estimates based on a sample; see introduction. For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts

	The SMSA	Jefferson Parish									
		Total	Estelle (CDP)	Gretna city	Harahan city	Harvey (CDP)	Jefferson (CDP)	Kenner city	Marrero (CDP)	Metairie (CDP)	River Ridge (CDP)
NATIVITY AND PLACE OF BIRTH											
Total persons	1 187 073	454 592	12 724	20 615	11 384	22 709	15 550	66 382	36 548	164 160	17 146
Native	1 142 138	434 098	11 975	19 824	11 142	21 019	15 070	62 544	35 861	156 463	16 655
Born in State of residence	888 872	334 145	9 518	16 184	9 161	15 858	12 307	44 564	30 622	120 141	12 730
Born in different State	248 166	97 710	2 379	3 598	1 924	4 899	2 713	17 671	5 112	35 603	3 816
Born abroad, at sea, etc.	5 100	2 243	78	42	57	262	50	309	127	719	109
Foreign born	44 935	20 494	749	791	242	1 690	480	3 838	687	7 697	491
LANGUAGE SPOKEN AT HOME AND ABILITY TO SPEAK ENGLISH											
Persons 5 to 17 years	261 735	102 383	3 611	3 921	2 221	5 063	2 037	16 635	9 934	32 274	3 715
Speak a language other than English at home	14 594	6 927	411	268	97	509	141	1 532	454	1 992	163
Percent who speak English not well or not at all	15.7	12.1	18.5	11.6	5.2	37.1	5.7	7.8	6.4	12.3	-
Persons 18 years and over	829 507	316 769	7 465	15 075	8 419	15 171	12 641	43 006	23 180	121 646	12 224
Speak a language other than English at home	64 964	30 765	924	1 452	499	2 080	1 058	4 312	2 218	10 577	617
Percent who speak English not well or not at all	14.1	12.7	26.8	8.7	6.8	30.4	5.3	13.5	7.9	10.4	6.5
SCHOOL ENROLLMENT AND TYPE OF SCHOOL											
Persons 3 years old and over enrolled in school	338 938	125 968	3 937	4 491	2 874	5 742	2 786	19 668	11 282	44 320	4 705
Nursery school	18 275	6 677	242	183	138	271	166	1 229	424	2 643	233
Private	13 358	5 720	205	119	131	205	130	1 034	296	2 469	224
Kindergarten	18 453	7 048	382	283	210	354	104	1 254	711	2 052	222
Private	7 246	3 657	238	108	160	152	63	583	280	1 324	143
Elementary (1 to 8 years)	162 082	63 847	2 478	2 457	1 243	3 200	1 246	10 941	6 089	19 289	2 194
Private	47 739	23 031	699	590	619	811	405	2 840	1 [illegible]	[illegible]	[illegible]
High school (1 to 4 years)	80 655	30 442	584	1 130	[illegible]	[illegible]	[illegible]	[illegible]	2 943	11 179	1 301
Private	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	237	5 201	614
College	59 473	17 954	251	[illegible]	[illegible]	[illegible]	614	3 991	1 115	9 157	755
Persons 25 years old and over	669 839	253 666	5 941	11 928	6 913	11 533	10 402	36 349	18 425	100 135	9 978
Elementary: 0 to 4 years	30 562	9 428	245	779	195	787	485	914	1 536	1 786	243
5 to 7 years	65 007	20 312	605	1 723	503	1 425	1 165	2 307	2 523	5 240	509
8 years	44 881	14 112	330	940	453	839	874	1 619	1 446	4 483	396
High school: 1 to 3 years	104 757	36 197	1 030	2 459	1 151	1 821	1 876	4 942	3 811	11 166	1 227
4 years	212 818	91 132	2 646	3 889	2 409	4 032	3 596	12 486	6 432	35 970	3 504
College: 1 to 3 years	99 945	41 392	727	1 274	1 084	1 527	1 322	6 126	1 809	18 986	1 992
4 or more years	111 869	41 093	358	864	1 118	1 102	1 084	5 955	868	22 504	2 107
Percent high school graduates	63.4	68.4	62.8	50.5	66.7	57.8	57.7	71.5	49.4	77.4	76.2
FERTILITY											
Women 35 to 44 years	67 582	27 651	738	991	630	1 182	636	4 055	2 194	10 265	1 046
Children ever born	187 371	74 979	2 347	2 754	1 652	3 302	1 667	11 515	6 966	24 714	2 931
Per 1,000 women	2 772	2 712	3 180	2 779	2 622	2 794	2 621	2 840	3 175	2 408	2 802
RESIDENCE IN 1975											
Persons 5 years and over	1 091 324	417 345	11 065	18 900	10 546	20 123	14 656	59 765	33 264	153 912	15 975
Same house	611 808	223 657	5 294	11 423	6 777	8 334	9 202	23 488	20 499	86 580	10 292
Different house in United States	461 869	185 958	5 103	7 080	3 715	10 699	5 262	35 070	12 192	64 896	5 565
Central city of this SMSA	185 801	31 559	557	1 187	665	1 514	1 496	5 022	1 969	13 869	582
Remainder of this SMSA	151 649	101 424	3 485	4 029	2 416	5 357	2 310	18 915	8 084	33 306	3 340
Outside this SMSA	124 419	52 975	1 061	1 864	634	3 828	1 456	11 133	2 139	17 721	1 643
Different SMSA	94 725	39 246	694	1 466	542	2 406	1 165	8 858	1 361	13 835	1 292
Not in an SMSA	29 694	13 729	367	398	92	1 422	291	2 275	778	3 886	351
Abroad	17 647	7 730	668	397	54	1 090	192	1 207	573	2 436	118
JOURNEY TO WORK											
Workers 16 years and over	484 843	202 356	4 819	8 213	5 300	9 565	6 740	29 920	13 934	80 849	7 781
Private vehicle: Drive alone	299 235	142 668	3 337	5 299	3 894	6 322	4 670	21 407	9 409	58 644	5 758
Carpool	99 668	42 928	1 320	1 663	1 113	2 255	1 071	6 476	3 302	16 349	1 482
Public transportation	52 823	6 759	15	481	57	312	456	886	469	2 668	247
Bus or streetcar	51 085	6 194	-	427	57	270	397	795	461	2 501	225
Subway, elevated train, or railroad	71	15	15	-	-	-	-	-	-	-	-
Walked only	18 983	4 736	61	543	100	361	397	413	404	1 474	110
Other means	9 027	3 533	51	156	91	249	103	470	274	1 035	104
Worked at home	5 107	1 732	35	71	45	66	43	268	76	679	80
Persons per private vehicle	1.16	1.15	1.19	1.15	1.14	1.17	1.12	1.15	1.17	1.14	1.13
Mean travel time to work (minutes)	25.5	24.7	28.3	23.9	24.4	26.2	22.1	26.8	24.3	23.2	25.2
Worked in SMSA of residence	403 576	165 388	3 553	6 457	4 374	7 187	5 454	24 697	10 628	67 980	6 499
New Orleans city—central business district	68 786	18 917	207	464	396	416	630	2 607	518	10 500	560
Remainder of New Orleans city	165 487	37 855	562	1 339	1 041	1 329	1 599	5 361	1 398	18 658	1 336
Kenner city	14 353	11 815	33	69	151	37	119	6 526	49	3 946	658
Gretna city	13 448	10 692	444	2 299	111	1 215	152	305	1 649	1 009	116
Remainder of Jefferson Parish	107 260	84 846	2 307	2 243	2 662	4 190	2 897	9 721	6 991	33 150	3 786
Slidell city	7 847	116	-	-	13	-	-	24	-	68	-
Covington city	4 499	47	-	-	-	-	-	16	-	31	-
Remainder of St. Tammany Parish	9 376	117	-	-	-	-	16	13	-	88	-
St. Bernard Parish	12 520	983	-	43	-	-	41	124	23	530	43
Worked outside SMSA of residence	23 598	13 519	469	753	379	1 233	344	1 578	951	3 285	418
St. Charles Parish	6 530	4 856	92	198	182	276	172	839	269	1 499	258
Plaquemines Parish	7 105	4 447	289	422	60	723	15	87	528	290	-
Hancock County, Miss.	830	60	-	-	-	-	-	13	-	47	-
Harrison County, Miss.	186	98	-	-	14	-	-	30	-	40	-
Tangipahoa Parish	380	124	-	-	12	-	19	-	-	93	-
Washington Parish	273	10	-	-	-	-	-	-	-	-	-
Lafourche Parish	279	151	-	-	-	10	-	-	21	56	-
Baton Rouge city	629	258	-	-	14	-	10	44	-	156	12
Remainder of Baton Rouge, La. SMSA	301	89	13	-	-	-	11	14	-	27	-
St. John the Baptist Parish	869	484	-	-	25	-	10	159	40	187	25
St. James Parish	247	172	-	-	13	-	-	58	-	80	12
Worked elsewhere	5 969	2 770	75	133	59	224	107	334	93	810	111
Place of work not reported	56 981	22 908	665	1 052	654	1 277	700	3 697	2 142	8 805	952

Table H-1. Occupancy, Utilization, and Financial Characteristics of Housing Units: 1980

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts

	The SMSA	Jefferson Parish									
		Total	Estelle (CDP)	Gretna city	Harahan city	Harvey (CDP)	Jefferson (CDP)	Kenner city	Marrero (CDP)	Metairie (CDP)	River Ridge (CDP)	Terrytown (CDP)
Total housing units	455 477	166 124	3 638	8 364	4 057	8 279	6 940	22 304	11 725	64 921	6 199	8 418
Vacant seasonal and migratory	2 065	887	1	7	2	4	3	16	9	22	–	–
Year-round housing units	453 412	165 237	3 637	8 357	4 055	8 275	6 937	22 288	11 716	64 899	6 199	8 418
YEAR-ROUND HOUSING UNITS												
Tenure by Race and Spanish Origin of Householder												
Owner-occupied housing units	225 004	98 983	3 044	3 980	3 070	3 773	3 868	13 496	7 815	37 241	4 171	4 256
Percent of occupied housing units	53.8	63.6	86.6	51.9	78.5	49.4	59.1	64.6	71.3	60.3	71.4	54.4
White	179 391	88 339	2 760	3 262	3 046	3 019	3 559	11 833	5 396	35 892	3 927	4 117
Black	42 780	9 064	165	686	5	658	288	1 340	2 305	909	215	48
American Indian, Eskimo, and Aleut	437	249	30	13	6	10	5	28	28	35	14	15
Asian and Pacific Islander[1]	1 302	775	62	11	7	62	9	117	57	254	6	41
Spanish origin[2]	7 664	3 767	137	88	73	156	113	846	187	1 289	99	289
Renter-occupied housing units	193 402	56 702	471	3 695	840	3 860	2 674	7 391	3 146	24 480	1 667	3 567
White	110 432	46 588	432	2 446	824	2 466	2 197	5 957	1 727	22 367	1 254	3 083
Black	78 847	8 623	20	1 179	5	1 173	447	1 266	1 372	1 488	398	355
American Indian, Eskimo, and Aleut	393	200	6	19	5	15	5	36	13	46	4	20
Asian and Pacific Islander[1]	2 015	688	9	21	2	135	10	42	20	302	5	49
Spanish origin[2]	7 696	2 710	28	118	22	204	119	485	78	1 227	36	216
Vacancy Status												
Vacant housing units	35 006	9 552	122	682	145	642	395	1 401	755	3 178	361	595
For sale only	4 558	1 790	52	68	31	90	29	460	203	405	21	112
Vacant less than 6 months	3 437	1 485	40	29	25	68	19	391	188	359	19	108
Median price asked	$63 800	$65 500	$56 700	$37 500	$86 300	$63 300	$42 500	$85 000	$58 900	$72 800	$97 000	$71 000
	16 197	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	8 361	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$179	$281	$195	$221	$291	$282
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	4 388	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	106	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Held for occasional use	7 946	1 514	18	99	29	78	138	86	163	[illegible]	[illegible]	[illegible]
Other vacant	1 176	129	1	6	–	3	5	5	22	27	2	1
Boarded up												
Lacking Complete Plumbing for Exclusive Use												
Year-round housing units	5 784	1 190	11	144	11	76	43	122	148	250	48	76
Owner-occupied housing units	1 039	286	5	32	4	21	13	25	29	54	9	4
Renter-occupied housing units	3 423	707	3	89	4	44	25	78	91	182	31	32
Vacant for rent or for sale only	415	91	–	13	–	1	1	1	12	2	7	40
Rooms												
Year-round housing units	453 412	165 237	3 637	8 357	4 055	8 275	6 937	22 288	11 716	64 899	6 199	8 418
1 room	7 386	1 929	3	137	10	97	103	137	264	927	28	92
2 rooms	19 724	5 711	20	582	82	316	369	607	375	2 428	201	209
3 rooms	61 951	18 721	143	1 405	235	1 107	1 066	1 878	1 200	7 835	860	969
4 rooms	104 372	31 462	332	2 102	764	2 306	1 954	4 082	2 074	12 085	837	1 361
5 rooms	99 993	36 531	1 271	1 874	954	1 909	1 661	5 280	3 303	12 349	1 079	1 497
6 rooms	77 026	34 548	1 068	1 203	935	1 211	1 086	5 232	2 721	13 530	1 268	1 782
7 rooms	42 564	19 728	563	562	563	793	437	2 755	1 124	8 227	991	1 334
8 or more rooms	40 396	16 607	237	492	512	536	261	2 317	655	7 518	935	1 174
Median, year-round housing units	4.8	5.2	5.5	4.5	5.5	4.7	4.5	5.3	5.1	5.2	5.6	5.5
Median, occupied housing units	4.9	5.2	5.6	4.6	5.5	4.7	4.6	5.4	5.1	5.3	5.7	5.6
Median, owner-occupied housing units	5.9	6.0	5.7	5.5	5.9	5.8	5.2	6.0	5.5	6.2	6.3	6.6
Median, renter-occupied housing units	3.9	3.9	4.5	3.7	4.0	4.0	3.7	4.1	3.8	3.8	3.6	4.1
Persons in Unit												
Occupied housing units	418 406	155 685	3 515	7 675	3 910	7 633	6 542	20 887	10 961	61 721	5 838	7 823
1 person	102 986	30 745	212	1 983	560	1 467	2 136	3 010	1 656	14 948	1 039	1 266
2 persons	117 725	44 656	632	2 382	1 298	2 093	2 363	5 218	2 580	19 505	1 778	2 116
3 persons	74 193	29 991	857	1 410	869	1 571	935	4 538	2 192	10 843	1 131	1 686
4 persons	61 748	26 636	1 000	1 001	643	1 348	600	4 270	2 180	9 122	948	1 503
5 persons	32 632	13 396	476	476	322	620	263	2 196	1 145	4 518	550	770
6 persons	15 566	5 877	181	234	123	277	135	975	593	1 764	229	313
7 persons	8 975	2 983	105	125	72	170	66	469	365	782	127	121
8 or more persons	4 581	1 401	52	64	23	87	44	211	250	239	36	48
Median, occupied housing units	2.40	2.58	3.56	2.28	2.61	2.66	1.98	2.99	3.07	2.32	2.59	2.81
Median, owner-occupied housing units	2.82	3.02	3.59	2.42	2.77	3.07	2.16	3.29	3.27	2.84	2.95	3.40
Median, renter-occupied housing units	2.01	2.01	3.32	2.08	2.21	2.34	1.68	2.42	2.55	1.72	1.89	2.20
Persons Per Room												
Occupied housing units	418 406	155 685	3 515	7 675	3 910	7 633	6 542	20 887	10 961	61 721	5 838	7 823
1.00 or less	389 906	147 779	3 294	7 086	3 783	7 013	6 264	19 638	9 898	60 151	5 589	7 543
1.01 to 1.50	19 899	5 772	157	405	105	417	188	990	777	1 152	174	202
1.51 or more	8 601	2 134	64	184	22	203	90	259	286	418	75	78
VALUE												
Specified owner-occupied housing units	191 038	87 703	2 733	3 422	2 781	3 347	3 150	12 065	6 887	33 855	3 745	3 922
Less than $10,000	2 157	608	7	47	7	49	50	34	95	83	12	3
$10,000 to $14,999	3 163	973	11	119	26	104	58	86	150	119	29	2
$15,000 to $19,999	5 592	1 884	29	179	48	169	103	206	264	344	41	9
$20,000 to $24,999	8 552	3 057	75	282	90	186	186	309	456	652	57	27
$25,000 to $29,999	8 968	3 519	105	323	108	184	208	358	489	723	62	70
$30,000 to $34,999	11 555	4 979	217	383	164	240	250	556	714	1 058	132	84
$35,000 to $39,999	12 786	5 843	330	393	172	260	294	702	783	1 332	126	150
$40,000 to $49,999	32 455	15 348	1 019	650	480	666	835	2 295	1 700	4 578	461	683
$50,000 to $59,999	27 301	13 161	428	351	421	392	554	1 944	1 000	5 440	597	786
$60,000 to $79,999	41 141	21 204	291	341	566	711	485	2 589	950	10 033	987	1 589
$80,000 to $99,999	17 414	9 158	112	121	323	308	92	1 675	166	5 051	499	434
$100,000 to $149,999	12 598	5 360	68	125	283	76	30	932	96	2 996	474	78
$150,000 to $199,999	4 010	1 475	30	60	67	2	2	212	14	822	163	2
$200,000 or more	3 346	1 134	11	48	26	–	3	167	10	624	105	5
Median	$53 000	$54 600	$45 700	$39 800	$56 000	$47 100	$45 300	$56 600	$42 700	$64 800	$66 700	$61 500
CONTRACT RENT												
Specified renter-occupied housing units	185 871	55 351	454	3 604	823	3 759	2 606	7 217	3 017	24 064	1 625	3 460
Median	$177	$243	$198	$156	$235	$225	$174	$265	$134	$266	$279	$257

[1]Excludes "Other Asian and Pacific Islander" groups identified in sample tabulations. [2]Persons of Spanish origin may be of any race.

Table H-1. Occupancy, Utilization, and Financial Characteristics of Housing Units: 1980—Con.

[For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts	Jefferson Parish—Con.			Orleans Parish		St. Bernard Parish					St. Tammany Parish		
	Timberlane (CDP)	Westwego city	Remainder	Total	New Orleans city	Total	Arabi (CDP)	Chalmette (CDP)	Violet (CDP)	Remainder	Total	Slidell city	Remainder
Total housing units	**3 663**	**4 776**	**12 840**	**226 452**	**226 452**	**21 592**	**3 724**	**11 465**	**3 587**	**2 816**	**41 309**	**8 803**	**32 506**
Vacant seasonal and migratory	–	–	823	397	397	156	2	7	2	145	625	7	618
Year-round housing units	3 663	4 776	12 017	226 055	226 055	21 436	3 722	11 458	3 585	2 671	40 684	8 796	31 888
YEAR-ROUND HOUSING UNITS													
Tenure by Race and Spanish Origin of Householder													
Owner-occupied housing units	2 755	2 498	9 016	81 970	81 970	15 739	2 867	7 986	2 711	2 175	28 312	6 661	21 651
Percent of occupied housing units	78.2	56.1	80.5	39.7	39.7	76.4	80.0	71.6	80.2	88.2	79.3	80.3	79.0
White	2 512	2 326	6 690	50 416	50 416	15 167	2 842	7 912	2 376	2 037	25 469	6 211	19 258
Black	179	149	2 117	30 658	30 658	407	...	8	295	102	2 651	403	2 248
American Indian, Eskimo, and Aleut	6	16	43	64	64	60	6	17	12	25	64	11	53
Asian and Pacific Islander[1]	44	2	103	424	424	58	10	26	20	...	45	13	32
Spanish origin[2]	106	46	338	2 204	2 204	1 221	144	353	237	487	472	118	354
Renter-occupied housing units	769	1 958	2 184	124 465	124 465	4 852	718	3 175	669	290	7 383	1 634	5 749
White	664	1 654	1 517	53 284	53 284	4 597	712	3 124	507	254	5 963	1 366	4 597
Black	89	272	559	68 689	68 689	184	...	2	152	30	1 351	251	1 100
American Indian, Eskimo, and Aleut	2	20	9	143	143	22	–	13	5	4	28	7	21
Asian and Pacific Islander[1]	9	3	81	1 281	1 281	32	3	26	2	...	14	3	11
Spanish origin[2]	20	70	87	4 560	4 560	284	46	157	36	45	142	38	104
Vacancy Status													
Vacant housing units	**139**	**320**	**817**	**19 620**	**19 620**	**845**	**137**	**297**	**205**	**206**	**4 989**	**501**	**4 488**
For sale only	50	24	245	1 699	1 699	181	13	44	67	57	888	133	755
Vacant less than 6 months	48	16	175	1 111	1 111	165	7	40	65	53	676	107	569
Median price asked	$71 900	$23 800	$60 400	$54 100	$54 100	$61 800	$57 500	$68 500	$63 100	$47 500	$72 500	$67 900	$74 200
For rent	54	161	109	9 043	9 043	276	32	145	64	[illegible]	[illegible]	[illegible]	[illegible]
Vacant less than 2 months	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Median rent asked	[illegible]	[illegible]	[illegible]	[illegible]	$173	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rented or sold, awaiting occupancy	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	39	[illegible]	34	[illegible]	[illegible]	674
Held for occasional use	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other vacant	[illegible]	109	277	[illegible]	[illegible]	184	46	56	25	55	960	53	907
Boarded up	2	27	28	920	920	21	6	–	3	12	106	7	99
Lacking Complete Plumbing for Exclusive Use													
Year-round housing units	**9**	**74**	**178**	**3 653**	**3 653**	**103**	**8**	**34**	**24**	**37**	**838**	**70**	**768**
Owner-occupied housing units	1	21	68	436	436	34	4	6	7	17	283	20	263
Renter-occupied housing units	8	47	73	2 424	2 424	54	4	27	14	9	238	27	211
Vacant for rent or for sale only	–	1	13	281	281	1	–	–	–	1	42	4	38
Rooms													
Year-round housing units	**3 663**	**4 776**	**12 017**	**226 055**	**226 055**	**21 436**	**3 722**	**11 458**	**3 585**	**2 671**	**40 684**	**8 796**	**31 888**
1 room	6	28	97	5 086	5 086	58	11	34	4	9	313	33	280
2 rooms	45	212	265	12 899	12 899	321	54	176	39	52	793	86	707
3 rooms	242	870	911	39 333	39 333	1 147	184	583	212	168	2 750	305	2 445
4 rooms	305	1 443	1 817	60 372	60 372	4 769	696	2 793	711	569	7 769	828	6 941
5 rooms	581	1 195	3 578	47 177	47 177	6 727	1 124	3 240	1 317	1 046	9 558	1 919	7 639
6 rooms	793	627	3 092	29 105	29 105	5 123	1 002	2 695	891	535	8 250	2 206	6 044
7 rooms	774	244	1 361	15 083	15 083	2 058	428	1 162	273	195	5 695	1 989	3 706
8 or more rooms	917	157	896	17 000	17 000	1 233	223	775	138	97	5 556	1 430	4 126
Median, year-round housing units	6.3	4.4	5.3	4.4	4.4	5.2	5.3	5.2	5.1	5.0	5.4	6.1	5.2
Median, occupied housing units	6.4	4.5	5.4	4.5	4.5	5.2	5.4	5.2	5.1	5.0	5.5	6.1	5.3
Median, owner-occupied housing units	6.8	5.1	5.6	5.8	5.8	5.5	5.6	5.6	5.3	5.1	5.8	6.4	5.6
Median, renter-occupied housing units	4.4	3.8	4.3	3.9	3.9	4.1	4.1	4.1	4.1	4.4	4.4	4.8	4.3
Persons in Unit													
Occupied housing units	**3 524**	**4 456**	**11 200**	**206 435**	**206 435**	**20 591**	**3 585**	**11 161**	**3 380**	**2 465**	**35 695**	**8 295**	**27 400**
1 person	406	906	1 156	63 965	63 965	2 701	612	1 451	354	284	5 575	973	4 602
2 persons	911	1 358	2 422	57 261	57 261	5 775	1 230	3 233	739	573	10 033	2 187	7 846
3 persons	671	885	2 403	32 743	32 743	4 561	739	2 569	717	536	6 898	1 702	5 196
4 persons	805	683	2 533	23 990	23 990	4 106	545	2 239	800	522	7 016	1 937	5 079
5 persons	440	324	1 296	13 529	13 529	2 055	262	1 075	411	307	3 652	951	2 701
6 persons	171	173	709	7 300	7 300	865	118	397	205	145	1 524	356	1 168
7 persons	89	83	409	4 911	4 911	376	64	153	90	69	705	142	563
8 or more persons	31	44	272	2 736	2 736	152	15	44	64	29	292	47	245
Median, occupied housing units	3.16	2.47	3.34	2.19	2.19	2.90	2.46	2.85	3.33	3.20	2.82	3.08	2.74
Median, owner-occupied housing units	3.49	2.62	3.43	2.45	2.45	3.08	2.62	3.07	3.51	3.20	2.94	3.20	2.85
Median, renter-occupied housing units	2.02	2.33	2.96	1.97	1.97	2.35	1.98	2.34	2.65	3.19	2.40	2.55	2.36
Persons Per Room													
Occupied housing units	**3 524**	**4 456**	**11 200**	**206 435**	**206 435**	**20 591**	**3 585**	**11 161**	**3 380**	**2 465**	**35 695**	**8 295**	**27 400**
1.00 or less	3 416	4 090	10 014	188 737	188 737	19 562	3 488	10 732	3 077	2 265	33 828	8 047	25 781
1.01 to 1.50	93	277	835	11 859	11 859	841	81	358	234	168	1 427	195	1 232
1.51 or more	15	89	351	5 839	5 839	188	16	71	69	32	440	53	387
VALUE													
Specified owner-occupied housing units	**2 476**	**2 027**	**7 293**	**68 887**	**68 887**	**13 427**	**2 636**	**7 040**	**2 289**	**1 462**	**21 021**	**6 032**	**14 989**
Less than $10,000	3	76	142	851	851	121	16	27	27	51	577	49	528
$10,000 to $14,999	3	96	170	1 461	1 461	145	17	50	34	44	584	63	521
$15,000 to $19,999	12	160	320	2 773	2 773	240	48	68	59	65	695	89	606
$20,000 to $24,999	20	235	482	4 083	4 083	472	119	159	84	110	940	146	794
$25,000 to $29,999	24	204	661	3 989	3 989	587	119	266	99	103	873	183	690
$30,000 to $34,999	43	251	887	4 698	4 698	836	179	379	136	142	1 042	262	780
$35,000 to $39,999	90	220	991	4 867	4 867	1 027	224	415	208	180	1 049	336	713
$40,000 to $49,999	418	336	1 227	11 285	11 285	3 255	719	1 394	712	430	2 567	940	1 627
$50,000 to $59,999	301	231	716	8 780	8 780	2 518	512	1 392	443	171	2 842	978	1 864
$60,000 to $79,999	1 047	155	1 460	11 950	11 950	3 195	537	2 131	411	116	4 792	1 908	2 884
$80,000 to $99,999	216	33	128	5 350	5 350	679	92	510	54	23	2 227	806	1 421
$100,000 to $149,999	103	28	71	4 942	4 942	274	45	197	19	13	2 022	226	1 796
$150,000 to $199,999	77	2	22	1 949	1 949	40	6	27	3	4	546	34	512
$200,000 or more	119	–	16	1 909	1 909	38	3	25	–	10	265	12	253
Median	$66 100	$34 800	$40 000	$50 400	$50 400	$50 100	$48 500	$54 300	$47 300	$40 800	$57 200	$59 700	$55 600
CONTRACT RENT													
Specified renter-occupied housing units	**748**	**1 888**	**2 086**	**118 875**	**118 875**	**4 737**	**706**	**3 112**	**653**	**266**	**6 908**	**1 578**	**5 330**
Median	$286	$153	$177	$153	$153	$197	$154	$211	$152	$148	$181	$245	$164

[1]Excludes "Other Asian and Pacific Islander" groups identified in sample tabulations. [2]Persons of Spanish origin may be of any race.

Table H-8. **Financial Characteristics of Housing Units: 1980**

[Data are estimates based on a sample; see introduction. For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts	The SMSA	Jefferson Parish									
		Total	Estelle (CDP)	Gretna city	Harahan city	Harvey (CDP)	Jefferson (CDP)	Kenner city	Marrero (CDP)	Metairie (CDP)	River Ridge (CDP)	Terrytown (CDP)
Specified owner-occupied housing units	**190 903**	**87 859**	**2 739**	**3 435**	**2 793**	**3 340**	**3 163**	**12 125**	**6 897**	**33 839**	**3 745**	**3 925**
MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS												
With a mortgage	131 800	66 571	2 465	1 784	1 930	2 404	1 276	10 934	4 771	25 233	2 927	3 616
Less than $100	1 474	459	7	42	5	22	34	75	55	142	–	1
$100 to $199	17 129	9 343	253	515	272	282	377	1 165	838	3 436	448	440
$200 to $299	36 929	19 635	843	690	628	748	426	2 633	1 649	7 392	877	1 078
$300 to $399	27 113	13 797	651	287	402	491	208	1 971	1 011	5 263	572	1 035
$400 to $599	33 282	16 711	604	198	408	612	165	3 205	1 032	6 405	714	844
$600 or more	15 873	6 626	107	52	215	249	66	1 885	186	2 595	316	210
Median	$336	$327	$316	$240	$312	$329	$250	$381	$290	$331	$325	$329
Not mortgaged	59 103	21 288	274	1 651	863	936	1 887	1 191	2 126	8 606	818	307
Less than $100	27 790	11 157	113	906	429	474	1 185	654	1 221	4 165	371	109
$100 to $199	27 469	9 446	149	722	416	454	684	515	847	4 091	402	184
$200 or more	3 844	685	12	23	18	8	18	22	58	350	45	18
Median	$103	$98	$107	$96	$100	$99	$90	$97	$93	$102	$105	$110
HOUSEHOLD INCOME IN 1979 BY SELECTED MONTHLY OWNER COSTS AS PERCENTAGE OF INCOME												
Less than $10,000	37 410	13 348	377	945	358	732	851	1 473	1 407	4 365	457	344
Less than 15 percent	6 368	2 551	35	208	110	121	219	136	301	847	69	37
15 to 24 percent	7 833	2 627	7	282	68	157	267	170	265	938	94	55
25 to 29 percent	3 197	1 202	34	93	50	51	87	111	147	432	35	23
30 percent or more	17 782	6 385	284	307	115	348	255	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	23.4	24.0	[illegible]	[illegible]	[illegible]	[illegible]	28.4	34.5	[illegible]
[illegible]	[illegible]	[illegible]	750	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15 to 24 percent	13 521	6 500	292	233	169	205	152	1 059	554	2 338	253	335
25 to 29 percent	4 535	2 142	158	35	50	86	41	364	170	638	99	123
30 percent or more	8 322	3 900	137	100	122	153	89	781	291	1 220	159	203
Not computed	...	...	...	...	...	...	...	...	...	...	...	...
Median	17.7	18.6	22.2	13.0	16.3	18.7	10.6	22.2	17.6	17.8	18.5	22.0
$20,000 or more	108 492	54 317	1 612	1 585	1 803	1 918	1 431	7 788	3 741	22 420	2 523	2 746
Less than 15 percent	67 115	33 565	860	1 336	1 214	1 159	1 224	3 330	2 516	14 676	1 807	1 688
15 to 24 percent	30 635	15 768	640	200	483	606	178	3 097	946	6 014	527	884
25 to 29 percent	6 182	3 110	97	25	78	99	29	815	229	1 019	80	120
30 percent or more	4 481	1 859	15	24	28	54	–	539	50	711	109	54
Not computed	...	...	...	...	...	...	...	...	...	...	...	...
Median	12.5	12.6	14.5	8.3	10.7	12.9	7.3	16.6	11.8	11.9	10.7	12.9
Specified renter-occupied housing units	**189 058**	**55 969**	**450**	**3 627**	**816**	**3 838**	**2 643**	**7 305**	**3 079**	**24 208**	**1 650**	**3 539**
GROSS RENT												
Less than $80	11 087	795	5	67	–	42	48	101	202	87	–	–
$80 to $99	4 240	700	–	107	12	6	46	125	139	137	–	12
$100 to $149	20 762	3 281	30	628	55	168	311	355	563	507	120	36
$150 to $199	31 780	5 630	110	680	73	389	447	640	642	1 163	229	103
$200 to $249	34 907	9 337	71	854	127	763	828	972	545	3 230	119	825
$250 to $299	31 709	12 969	80	666	165	1 148	449	1 299	410	6 873	520	791
$300 to $349	22 135	10 222	44	270	185	883	280	1 312	153	5 605	378	814
$350 to $399	12 245	5 525	38	68	102	158	53	1 168	135	3 026	145	391
$400 or more	13 667	5 660	65	55	58	158	89	1 167	57	3 057	108	555
No cash rent	6 526	1 850	7	232	39	123	92	166	233	523	31	12
Median	$234	$278	$255	$214	$286	$273	$229	$303	$187	$299	$286	$300
One-family house, detached or attached	50 707	13 014	185	1 345	325	774	881	1 795	1 260	3 887	213	561
Median gross rent	$227	$262	$361	$201	$264	$228	$215	$301	$209	$313	$290	$416
HOUSEHOLD INCOME IN 1979 BY GROSS RENT AS PERCENTAGE OF INCOME												
Less than $10,000	90 241	18 493	169	1 790	267	1 298	1 112	2 281	1 641	6 590	456	786
Less than 15 percent	3 203	171	–	27	–	10	–	24	30	15	–	–
15 to 19 percent	4 852	531	10	111	6	16	36	89	131	35	9	4
20 to 24 percent	6 072	943	8	123	13	36	70	68	170	190	22	–
25 to 29 percent	7 050	1 206	27	152	10	53	138	190	116	276	31	36
30 to 34 percent	7 016	1 433	45	134	4	113	113	130	154	420	65	63
35 percent or more	53 773	12 613	72	1 032	218	945	673	1 641	879	5 188	305	658
Not computed	8 275	1 596	7	211	16	125	82	139	161	466	24	25
Median	45.3	49.0	34.0	47.2	50+	50+	46.9	50+	41.5	50+	44.2	50+
$10,000 to $19,999	59 391	21 123	160	1 181	304	1 437	989	2 724	923	9 501	625	1 590
Less than 15 percent	9 962	2 016	20	306	32	129	173	262	220	348	42	58
15 to 19 percent	13 058	3 968	41	257	54	249	322	474	283	1 430	113	289
20 to 24 percent	14 096	5 567	55	270	64	449	195	587	170	2 746	189	468
25 to 29 percent	9 969	4 446	16	197	58	312	132	593	75	2 372	140	341
30 to 34 percent	5 098	2 240	10	48	32	106	82	302	33	1 293	62	201
35 percent or more	5 356	2 238	18	22	43	123	50	424	55	1 129	64	227
Not computed	1 852	648	–	81	21	69	35	82	87	183	15	6
Median	22.0	23.8	21.7	19.7	24.3	23.4	19.7	25.0	18.5	25.3	24.0	24.8
$20,000 or more	39 426	16 353	121	656	245	1 103	542	2 300	515	8 117	569	1 163
Less than 15 percent	22 428	8 433	63	466	111	683	391	964	398	3 788	279	699
15 to 19 percent	10 237	4 959	30	111	80	298	86	841	64	2 737	230	273
20 to 24 percent	3 900	1 903	28	29	40	69	50	375	19	1 033	35	141
25 to 29 percent	1 012	429	–	4	–	22	–	62	–	268	9	39
30 to 34 percent	356	201	–	7	8	10	–	14	–	125	–	11
35 percent or more	82	25	–	4	–	–	–	7	–	14	–	–
Not computed	1 411	403	–	35	6	21	15	37	34	152	16	–
Median	13.8	14.6	14.6	12.2	15.5	13.6	12.2	16.0	10.9	15.4	14.9	13.9

Table H-8. **Financial Characteristics of Housing Units: 1980**—Con.

[Data are estimates based on a sample; see introduction. For meaning of symbols, see introduction. For definitions of terms, see appendixes A and B]

Census Tracts	Jefferson Parish—Con.			Orleans Parish		St. Bernard Parish					St. Tammany Parish		
	Timberlane (CDP)	Westwego city	Remainder	Total	New Orleans city	Total	Arabi (CDP)	Chalmette (CDP)	Violet (CDP)	Remainder	Total	Slidell city	Remainder
Specified owner-occupied housing units	**2 484**	**2 027**	**7 347**	**68 531**	**68 531**	**13 454**	**2 637**	**7 054**	**2 289**	**1 474**	**21 059**	**6 040**	**15 019**
MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS													
With a mortgage	2 181	940	6 108	40 873	40 873	9 579	1 521	5 250	1 829	979	14 777	5 275	9 502
Less than $100	7	24	35	755	755	73	14	19	7	33	187	63	124
$100 to $199	40	331	946	4 817	4 817	1 856	434	812	412	198	1 113	372	741
$200 to $299	438	337	1 896	10 662	10 662	3 824	604	1 991	837	392	2 808	1 126	1 682
$300 to $399	563	127	1 216	8 767	8 767	1 877	282	1 123	279	193	2 672	1 055	1 617
$400 to $599	772	86	1 666	9 884	9 884	1 561	164	997	254	146	5 126	2 026	3 100
$600 or more	361	35	349	5 988	5 988	388	23	308	40	17	2 871	633	2 238
Median	$410	$229	$314	$344	$344	$272	$240	$290	$253	$262	$419	$402	$432
Not mortgaged	303	1 087	1 239	27 658	27 658	3 875	1 116	1 804	460	495	6 282	765	5 517
Less than $100	106	658	770	11 356	11 356	2 109	579	899	287	344	3 168	353	2 815
$100 to $199	142	407	433	13 562	13 562	1 669	526	836	160	147	2 792	375	2 417
$200 or more	55	22	36	2 740	2 740	97	11	69	13	4	322	37	285
Median	$115	$91	$89	$111	$111	$96	$99	$100	$86	$85	$100	$104	$99
HOUSEHOLD INCOME IN 1979 BY SELECTED MONTHLY OWNER COSTS AS PERCENTAGE OF INCOME													
Less than $10,000	137	644	1 258	17 265	17 265	2 465	561	1 011	464	429	4 332	794	3 538
Less than 15 percent	11	250	207	2 684	2 684	364	104	144	76	40	769	73	696
15 to 24 percent	6	113	205	3 742	3 742	575	220	170	74	111	889	157	732
25 to 29 percent	–	41	98	1 395	1 395	205	37	75	42	51	395	75	320
30 percent or more	112	224	697	8 372	8 372	1 144	170	550	227	197	1 881	394	1 487
[illegible]	–	[illegible]	[illegible]	[illegible]	31.2	[illegible]	[illegible]	33.9	[illegible]	[illegible]	[illegible]	33.2	28.6
$10,000 to $19,999	[illegible]	4[illegible]	2 [illegible]	17 020	17 020	3 511	565	1 648	[illegible]	[illegible]	[illegible]	1 001	[illegible]
Less than 15 percent	[illegible]	[illegible]	[illegible]	7 685	7 685	[illegible]	367	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15 to 24 percent	165	89	656	4 878	4 878	1 080	126	604	202	148	1 063	374	689
25 to 29 percent	63	6	309	1 599	1 599	342	42	169	90	41	452	169	283
30 percent or more	199	29	417	2 843	2 843	575	30	352	112	81	1 004	241	763
Not computed	...	...	...	...	...	...	...	...	...	...	...	...	...
Median	24.5	9.9	21.1	16.5	16.5	17.0	12.5	17.7	19.2	18.5	18.3	22.3	16.3
$20,000 or more	1 806	884	4 060	34 246	34 246	7 478	1 511	4 175	1 177	615	12 451	4 245	8 206
Less than 15 percent	878	748	2 129	22 151	22 151	5 427	1 262	2 891	822	452	5 972	2 024	3 948
15 to 24 percent	676	114	1 403	8 761	8 761	1 703	228	1 037	312	126	4 403	1 667	2 736
25 to 29 percent	137	6	376	1 693	1 693	207	6	150	20	31	1 172	332	840
30 percent or more	115	16	144	1 588	1 588	141	15	97	23	6	893	216	677
Not computed	...	...	...	...	...	...	...	...	...	...	...	...	...
Median	15.4	8.4	14.5	11.8	11.8	10.9	8.9	11.1	12.0	11.3	15.6	15.5	15.6
Specified renter-occupied housing units	**759**	**1 924**	**2 131**	**121 420**	**121 420**	**4 787**	**715**	**3 132**	**655**	**285**	**6 882**	**1 591**	**5 291**
GROSS RENT													
Less than $80	–	183	60	10 122	10 122	52	–	17	20	15	118	43	75
$80 to $99	–	58	58	3 372	3 372	74	7	15	38	14	94	24	70
$100 to $149	–	276	232	16 253	16 253	332	92	112	114	14	896	81	815
$150 to $199	31	643	480	24 555	24 555	704	163	335	141	65	891	179	712
$200 to $249	160	339	504	23 531	23 531	1 037	152	761	71	53	1 002	192	810
$250 to $299	185	169	214	16 711	16 711	1 131	139	843	124	25	898	257	641
$300 to $349	102	55	141	10 392	10 392	757	80	591	80	6	764	204	560
$350 to $399	139	34	68	5 948	5 948	260	15	229	10	6	512	189	323
$400 or more	135	11	145	6 964	6 964	147	15	106	26	–	896	377	519
No cash rent	7	156	229	3 572	3 572	293	52	123	31	87	811	45	766
Median	$300	$191	$211	$210	$210	$252	$219	$267	$200	$186	$252	$299	$236
One-family house, detached or attached	170	689	929	32 151	32 151	1 672	343	890	245	194	3 870	822	3 048
Median gross rent	$392	$179	$259	$216	$216	$240	$225	$269	$185	$210	$241	$350	$218
HOUSEHOLD INCOME IN 1979 BY GROSS RENT AS PERCENTAGE OF INCOME													
Less than $10,000	184	1 037	882	67 061	67 061	1 790	253	1 138	296	103	2 897	591	2 306
Less than 15 percent	–	47	18	2 989	2 989	15	–	–	15	–	28	5	23
15 to 19 percent	–	56	28	4 040	4 040	101	18	62	21	–	180	5	175
20 to 24 percent	12	138	93	4 914	4 914	83	16	34	33	–	132	–	132
25 to 29 percent	20	84	73	5 540	5 540	136	–	95	33	8	168	33	135
30 to 34 percent	10	92	90	5 307	5 307	166	37	86	29	14	110	13	97
35 percent or more	132	451	419	38 382	38 382	1 086	157	732	147	50	1 692	478	1 214
Not computed	10	169	161	5 889	5 889	203	25	129	18	31	587	57	530
Median	50+	36.6	38.9	43.6	43.6	44.4	43.5	45.5	38.1	45.6	50+	50+	47.5
$10,000 to $19,999	238	604	847	34 312	34 312	1 731	256	1 148	224	103	2 225	562	1 663
Less than 15 percent	7	214	205	7 275	7 275	260	62	83	76	39	411	68	343
15 to 19 percent	46	165	245	8 270	8 270	458	81	302	43	32	362	52	310
20 to 24 percent	62	135	177	7 622	7 622	435	49	340	40	6	472	118	354
25 to 29 percent	60	38	112	4 929	4 929	244	25	191	28	–	350	144	206
30 to 34 percent	25	23	23	2 483	2 483	149	16	120	13	–	226	43	183
35 percent or more	38	–	45	2 742	2 742	131	12	95	18	6	245	124	121
Not computed	–	29	40	991	991	54	11	17	6	20	159	13	146
Median	25.3	17.2	19.1	20.7	20.7	21.4	18.7	22.7	18.8	15.4	22.8	26.3	21.5
$20,000 or more	337	283	402	20 047	20 047	1 266	206	846	135	79	1 760	438	1 322
Less than 15 percent	152	204	235	12 385	12 385	786	151	524	68	43	824	180	644
15 to 19 percent	121	57	31	4 567	4 567	306	27	224	55	–	405	116	289
20 to 24 percent	28	–	56	1 739	1 739	74	9	60	5	–	184	76	108
25 to 29 percent	14	–	11	488	488	7	3	4	–	–	88	38	50
30 to 34 percent	15	–	11	109	109	–	–	–	–	–	46	23	23
35 percent or more	–	–	–	57	57	–	–	–	–	–	–	–	–
Not computed	7	22	58	702	702	93	16	34	7	36	213	5	208
Median	15.5	11.8	12.6	13.0	13.0	13.2	10.8	13.5	14.7	10.9	14.5	16.6	13.9

Table 1. General Characteristics of Persons: 1990

(For definitions of terms and meanings of symbols, see text)

Census Tract or Block Numbering Area	New Orleans, LA MSA	Jefferson Parish								
		Total	Estelle CDP	Gretna city	Harvey CDP	Jefferson CDP	Kenner city	Marrero CDP	Metairie CDP	River Ridge CDP
LAND AREA										
Square kilometers	5 979.7	792.4	13.1	9.1	17.2	16.8	39.2	20.9	60.2	7.3
Square miles	2 308.8	305.9	5.1	3.5	6.7	6.5	15.1	8.1	23.3	2.8
AGE										
All persons	**1 238 816**	**448 306**	**14 091**	**17 208**	**21 222**	**14 521**	**72 033**	**36 671**	**149 428**	**14 800**
Under 5 years	95 616	32 777	1 190	1 203	1 911	805	5 878	3 045	8 655	909
5 to 9 years	99 759	34 538	1 422	1 259	1 907	755	6 238	3 304	8 966	1 020
10 to 14 years	95 495	33 405	1 585	1 151	1 745	616	6 007	3 341	8 742	1 007
15 to 19 years	93 017	32 438	1 345	1 118	1 654	603	5 566	3 182	9 393	973
20 to 24 years	90 228	32 871	869	1 280	1 716	1 077	5 451	2 706	11 162	912
25 to 34 years	214 705	80 207	2 571	3 073	3 876	3 195	13 373	5 925	25 778	2 356
35 to 44 years	190 522	71 009	2 657	2 344	3 229	2 064	12 549	5 249	23 289	2 387
45 to 54 years	121 791	47 664	1 327	1 597	2 041	1 281	7 399	3 665	17 155	1 688
55 to 64 years	100 838	37 625	687	1 768	1 445	1 247	4 805	2 856	15 275	1 774
65 to 74 years	82 206	28 743	318	1 483	1 066	1 574	2 997	2 046	13 083	1 193
75 to 84 years	42 578	13 657	101	752	509	975	1 366	1 049	6 456	485
85 years and over	12 061	3 372	19	180	123	329	404	303	1 474	96
3 and 4 years	39 173	13 355	483	515	802	276	2 465	1 291	3 419	379
16 years and over	929 581	340 968	9 611	13 381	15 307	12 231	52 684	26 324	121 244	11 666
18 years and over	892 701	327 867	9 019	12 931	14 652	12 006	50 491	24 940	117 531	11 282
21 years and over	836 555	308 762	8 339	12 238	13 680	11 559	47 310	23 255	111 508	10 701
60 years and over	188 630	64 941	717	3 420	2 412	3 587	7 032	4 791	29 090	2 716
62 years and over	168 337	57 210	591	3 002	2 137	3 310	6 092	4 211	25 935	2 344
Median	31.8	32.2	28.1	33.6	29.2	25.9	30.3	29.8	35.8	35.9
Female	[illegible]	237 876	7 121	8 749	[illegible]	[illegible]	37 356	19 340	78 695	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5 to 9 years	[illegible]	16 832	717	626	[illegible]	345	[illegible]	1 [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15 to 19 years	46 489	15 979	656	509	779	297	2 808	1 563	4 654	453
20 to 24 years	46 788	17 019	428	602	873	596	2 782	1 428	5 831	479
25 to 34 years	111 698	41 479	1 371	1 455	2 034	1 575	7 021	3 167	13 121	1 199
35 to 44 years	98 955	36 656	1 344	1 142	1 638	980	6 581	2 857	12 147	1 198
45 to 54 years	63 811	24 752	649	822	1 032	658	3 793	1 923	9 092	880
55 to 64 years	54 641	19 998	327	982	736	674	2 489	1 532	8 304	948
65 to 74 years	47 145	16 350	170	810	623	923	1 731	1 183	7 498	622
75 to 84 years	27 830	8 893	70	500	334	642	917	705	4 165	313
85 years and over	8 937	2 500	13	125	87	239	309	239	1 092	73
3 and 4 years	19 169	6 516	246	234	394	129	1 214	621	1 695	182
16 years and over	497 262	180 387	4 884	6 846	7 976	6 522	27 809	14 282	65 017	6 071
18 years and over	479 048	173 995	4 607	6 639	7 660	6 411	26 734	13 597	63 190	5 899
21 years and over	450 191	164 299	4 272	6 328	7 201	6 175	25 094	12 747	60 080	5 614
60 years and over	112 070	38 004	389	2 003	1 408	2 202	4 148	2 851	17 169	1 498
62 years and over	101 022	33 828	333	1 769	1 268	2 042	3 652	2 561	15 441	1 282
Median	32.9	33.2	28.4	35.1	30.0	37.5	31.0	31.1	37.4	36.8
Male	**589 840**	**215 430**	**6 970**	**8 465**	**10 335**	**6 899**	**34 687**	**17 331**	**70 733**	**7 218**
Median age	30.6	31.2	27.7	31.9	28.5	34.3	29.5	28.2	34.2	34.8
HOUSEHOLD TYPE AND RELATIONSHIP										
All persons	**1 238 816**	**448 306**	**14 091**	**17 208**	**21 222**	**14 521**	**72 033**	**36 671**	**149 428**	**14 800**
In households	1 215 860	445 239	14 091	16 440	20 983	14 112	71 442	36 201	149 128	14 798
Householder	455 178	166 398	4 114	6 616	7 462	6 796	25 056	12 048	61 907	5 712
Family householder	315 732	118 308	3 623	4 320	5 415	3 641	18 614	9 310	40 585	4 113
Nonfamily householder	139 446	48 090	491	2 296	2 047	3 155	6 442	2 738	21 322	1 599
Living alone	120 270	41 468	396	2 015	1 735	2 708	5 459	2 435	18 635	1 390
Spouse	218 631	89 731	3 029	2 745	3 722	2 629	14 136	6 271	31 885	3 376
Child	421 632	150 231	5 799	5 207	7 703	3 183	25 929	13 956	44 035	4 696
Other relatives	79 107	25 037	794	1 230	1 307	838	4 060	2 960	6 775	632
Nonrelatives	41 312	13 842	355	642	789	666	2 261	966	4 526	380
Institutionalized persons	13 087	2 765	–	768	218	273	573	411	256	–
Other persons in group quarters	9 869	302	–	–	21	136	18	59	44	2
Persons per household	2.67	2.68	3.43	2.48	2.81	2.08	2.85	3.00	2.41	2.59
Persons per family	3.28	3.24	3.66	3.13	3.35	2.83	3.37	3.49	3.04	3.12
Persons 65 years and over	**136 845**	**45 772**	**438**	**2 415**	**1 698**	**2 878**	**4 767**	**3 398**	**21 013**	**1 774**
In households	130 494	44 091	438	2 410	1 563	2 615	4 236	3 110	20 754	1 773
Householder	89 856	29 208	229	1 709	1 056	1 825	2 694	2 212	13 728	1 166
Nonfamily householder	41 773	12 644	71	786	486	875	1 129	1 046	5 997	424
Living alone	40 200	12 210	69	761	453	850	1 091	1 006	5 828	402
Spouse	26 080	9 696	97	471	300	586	831	589	4 836	432
Other relatives	12 526	4 652	103	199	174	182	638	273	1 980	158
Nonrelatives	2 032	535	9	31	33	22	73	36	210	17
Institutionalized persons	6 027	1 650	–	5	135	259	530	285	238	–
Other persons in group quarters	324	31	–	–	–	4	1	3	21	1
FAMILY TYPE BY PRESENCE OF OWN CHILDREN										
Families	**315 732**	**118 308**	**3 623**	**4 320**	**5 415**	**3 641**	**18 614**	**9 310**	**40 585**	**4 113**
With own children under 18 years	160 702	59 153	2 414	1 894	3 066	1 295	10 557	5 014	16 997	1 779
Number of own children under 18 years	302 128	107 402	4 598	3 615	5 757	2 135	19 389	9 667	29 379	3 231
Married-couple families	**218 631**	**89 731**	**3 029**	**2 745**	**3 722**	**2 629**	**14 136**	**6 271**	**31 885**	**3 378**
With own children under 18 years	106 767	43 949	2 028	1 051	1 991	869	7 977	3 231	13 193	1 449
Number of own children under 18 years	200 321	80 778	3 900	1 968	3 664	1 449	14 821	6 088	23 594	2 656
Female householder, no husband present	**79 804**	**22 509**	**440**	**1 267**	**1 303**	**787**	**3 499**	**2 536**	**6 834**	**604**
With own children under 18 years	46 801	12 639	295	711	869	341	2 154	1 549	3 157	293
Number of own children under 18 years	90 404	22 605	542	1 427	1 746	560	3 900	3 173	4 860	523
MARITAL STATUS										
Males 15 years and over	**441 652**	**163 960**	**4 866**	**6 648**	**7 523**	**5 761**	**25 479**	**12 384**	**57 161**	**5 699**
Never married	146 892	48 487	1 307	2 316	2 490	1 794	7 492	4 050	16 690	1 526
Now married, except separated	232 604	93 931	3 140	3 013	3 941	2 805	14 800	6 633	33 179	3 486
Separated	14 957	4 852	94	353	331	233	748	460	1 358	160
Widowed	12 817	3 928	51	249	186	248	509	349	1 437	127
Divorced	34 382	12 762	274	717	575	681	1 930	892	4 497	406
Females 15 years and over	**506 294**	**183 626**	**5 028**	**6 947**	**8 136**	**6 584**	**28 431**	**14 597**	**65 904**	**6 165**
Never married	136 956	42 844	1 030	1 681	2 044	1 598	6 823	3 805	15 276	1 312
Now married, except separated	230 524	93 736	3 156	2 922	3 914	2 764	14 749	6 684	33 099	3 475
Separated	[illegible]	[illegible]	[illegible]	408	409	244	1 104	741	1 824	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	909	[illegible]	2 590	[illegible]	[illegible]	[illegible]

Table 1. General Characteristics of Persons: 1990—Con.

[For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	Jefferson Parish—Con.			Orleans Parish		St. Bernard Parish		St. Charles Parish	St. John the Baptist Parish	
	Terrytown CDP	Timberlane CDP	Westwego city	Total	New Orleans city	Total	Chalmette CDP		Total	Laplace C
LAND AREA										
Square kilometers	9.6	5.5	8.3	467.9	467.9	1 204.8	18.0	734.7	567.0	5
Square miles	3.7	2.1	3.2	180.6	180.6	465.2	7.0	283.7	218.9	2
AGE										
All persons	23 787	12 614	11 218	496 938	496 938	66 631	31 860	42 437	39 996	24 1
Under 5 years	2 028	803	910	38 574	38 574	4 917	2 136	3 896	3 838	2 4
5 to 9 years	1 901	978	970	38 557	38 557	5 221	2 299	4 030	4 371	2 6
10 to 14 years	1 783	1 098	827	37 105	37 105	5 140	2 445	3 652	3 636	2
15 to 19 years	1 820	1 091	791	39 412	39 412	4 829	2 359	2 867	2 881	1 7
20 to 24 years	1 994	1 054	867	39 607	39 607	4 748	2 328	2 716	2 589	1 4
25 to 34 years	4 555	2 269	1 912	83 898	83 898	11 180	4 906	8 194	7 666	4 8
35 to 44 years	3 702	2 136	1 476	71 309	71 309	9 927	5 016	6 615	6 156	4 0
45 to 54 years	2 768	1 615	1 049	44 015	44 015	6 600	3 462	4 045	3 617	2
55 to 64 years	1 799	802	1 062	39 803	39 803	6 490	3 180	3 288	2 413	1 2
65 to 74 years	992	448	875	36 592	36 592	5 029	2 623	1 957	1 686	8
75 to 84 years	369	222	388	21 410	21 410	2 080	951	895	904	4
85 years and over	76	98	91	6 656	6 656	470	155	282	239	
3 and 4 years	808	316	387	15 777	15 777	2 037	867	1 618	1 610	1 0
16 years and over	17 737	9 543	8 362	375 481	375 481	50 381	24 519	30 241	27 518	16 4
18 years and over	17 017	9 086	8 072	360 476	360 476	48 492	23 607	29 058	26 348	15
21 years and over	15 867	8 423	7 570	334 897	334 897	45 566	22 133	27 514	24 753	14 8
60 years and over	2 231	1 150	1 923	85 535	85 535	11 029	5 438	4 712	4 033	1 9
62 years and over	1 883	981	1 704	77 588	77 588	9 685	4 766	4 083	3 537	1 6
Median	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 055	[illegible] 055	[illegible] 627	16 481	21 69[illegible]	20 419	12
Under 5 years	9[illegible]6	357	[illegible]37	19 168	19 168	2 387	1 016	1 72[illegible]	1 [illegible]	1
5 to 9 years	9[illegible]9	[illegible]	[illegible]88	19 027	19 027	2 58[illegible]	[illegible]	[illegible]	[illegible]	1
10 to 14 years	880	533	398	18 368	18 368	2 461	1 156	1 824	1 767	1
15 to 19 years	947	538	403	20 129	20 129	2 401	1 180	1 402	1 453	
20 to 24 years	1 024	559	457	20 630	20 630	2 467	1 176	1 410	1 316	2
25 to 34 years	2 353	1 147	1 005	43 795	43 795	5 738	2 498	4 337	3 970	2
35 to 44 years	1 947	1 118	740	37 757	37 757	5 101	2 636	3 271	3 137	1
45 to 54 years	1 449	802	564	23 984	23 984	3 449	1 825	2 022	1 819	
55 to 64 years	918	411	596	22 478	22 478	3 539	1 725	1 678	1 212	
65 to 74 years	576	251	495	21 537	21 537	2 826	1 483	1 094	964	
75 to 84 years	259	149	255	14 222	14 222	1 318	592	581	553	
85 years and over	53	83	55	4 958	4 958	354	107	207	167	
3 and 4 years	407	132	185	7 876	7 876	975	417	794	769	8
16 years and over	9 356	4 967	4 496	205 889	205 889	26 720	12 984	15 707	14 293	8
18 years and over	8 999	4 734	4 353	198 450	198 450	25 744	12 515	15 122	13 689	7
21 years and over	8 363	4 414	4 080	184 916	184 916	24 282	11 785	14 357	12 884	1
60 years and over	1 285	678	1 128	52 548	52 548	6 341	3 100	2 671	2 294	
62 years and over	1 102	582	999	48 024	48 024	5 648	2 741	2 366	2 044	
Median	30.7	31.3	32.1	33.1	33.1	33.7	35.5	30.5	29.3	
Male	11 438	6 157	5 325	230 883	230 883	32 004	15 379	20 742	19 577	11
Median age	29.3	29.8	30.3	29.9	29.9	31.4	32.3	30.0	28.3	
HOUSEHOLD TYPE AND RELATIONSHIP										
All persons	23 787	12 614	11 218	496 938	496 938	66 631	31 860	42 437	39 996	24
In households	23 787	12 392	11 218	479 906	479 906	66 059	31 772	42 086	39 816	24
Householder	8 582	4 268	4 216	188 235	188 235	23 156	11 461	14 333	12 710	7
Family householder	6 352	3 273	3 035	118 026	118 026	18 291	8 885	11 422	10 326	6
Nonfamily householder	2 230	995	1 181	70 209	70 209	4 865	2 576	2 911	2 384	1
Living alone	1 837	789	1 028	60 673	60 673	4 230	2 248	2 520	2 060	1
Spouse	4 665	2 591	2 097	64 859	64 859	14 413	6 997	9 138	7 892	5
Child	8 339	4 478	3 771	166 168	166 168	23 150	10 823	15 717	15 812	9
Other relatives	1 293	644	734	40 327	40 327	3 749	1 693	1 925	2 503	1
Nonrelatives	908	411	400	20 317	20 317	1 591	798	973	899	
Institutionalized persons	-	211	-	7 788	7 788	532	88	314	177	
Other persons in group quarters	-	11	-	9 244	9 244	40	-	37	3	
Persons per household	2.77	2.90	2.66	2.55	2.55	2.85	2.77	2.94	3.13	
Persons per family	3.25	3.36	3.18	3.30	3.30	3.26	3.20	3.34	3.54	
Persons 65 years and over	1 437	768	1 354	64 658	64 658	7 579	3 729	3 134	2 829	1
In households	1 437	570	1 354	61 398	61 398	7 229	3 729	2 913	2 722	1
Householder	871	314	975	44 031	44 031	4 716	2 428	1 991	1 860	
Nonfamily householder	354	98	443	22 421	22 421	1 825	969	851	746	
Living alone	341	94	429	21 498	21 498	1 765	943	828	734	
Spouse	298	124	270	10 724	10 724	1 587	863	621	560	
Other relatives	249	125	99	5 404	5 404	855	407	270	275	
Nonrelatives	19	7	10	1 239	1 239	71	31	31	27	
Institutionalized persons	-	198	-	2 987	2 987	350	-	221	107	
Other persons in group quarters	-	-	-	273	273	-	-	-	-	
FAMILY TYPE BY PRESENCE OF OWN CHILDREN										
Families	6 352	3 273	3 035	118 026	118 026	18 291	8 885	11 422	10 326	6
With own children under 18 years	3 463	1 775	1 512	58 387	58 387	9 019	4 221	6 483	6 147	4
Number of own children under 18 years	6 114	3 197	2 725	113 702	113 702	16 284	7 448	12 180	12 057	7
Married-couple families	4 665	2 591	2 097	64 859	64 859	14 413	6 997	9 138	7 892	5
With own children under 18 years	2 432	1 390	970	28 271	28 271	7 104	3 251	5 109	4 770	[illegible]
Number of own children under 18 years	4 334	2 535	1 752	53 932	53 932	13 058	5 905	9 612	9 281	6
Female householder, no husband present	1 317	520	732	45 328	45 328	3 029	1 500	1 802	1 918	
With own children under 18 years	860	308	448	27 177	27 177	1 551	806	1 133	1 153	
Number of own children under 18 years	1 529	546	824	55 012	55 012	2 653	1 293	2 170	2 396	
MARITAL STATUS										
Males 15 years and over	8 549	4 677	3 941	173 212	173 212	24 160	11 758	14 857	13 560	[illegible]
Never married	2 562	1 434	1 029	72 555	72 555	6 052	2 975	3 730	3 844	
Now married, except separated	4 902	2 709	2 216	72 088	72 088	15 131	7 339	9 465	8 220	
Separated	271	104	145	7 558	7 558	570	246	372	405	
Widowed	129	80	147	6 438	6 438	658	310	341	319	
Divorced	685	350	404	14 573	14 573	1 749	888	949	772	
Females 15 years and over	9 526	5 058	4 570	209 490	209 490	27 193	13 222	16 002	14 591	
Never married	2 296	1 222	940	72 477	72 477	5 137	2 456	3 295	3 312	
Now married, except separated	4 902	2 711	2 213	70 261	70 261	15 114	7 326	9 463	8 181	
Separated	454	[illegible]94	227	12 322	12 322	869	435	504	540	
[illegible]	[illegible]	[illegible]	[illegible]	31 059	31 059	3 518	1 632	[illegible]	435	

Table 17. Social Characteristics of Persons: 1990

[Data based on sample and subject to sampling variability, see text. For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	New Orleans, LA MSA	Jefferson Parish							
		Total	Estelle CDP	Gretna city	Harvey CDP	Jefferson CDP	Kenner city	Marrero CDP	Metairie CDP
PLACE OF BIRTH									
All persons	**1 238 816**	**448 306**	**14 091**	**17 208**	**21 222**	**14 521**	**72 033**	**36 671**	**149 428**
Native	1 186 552	421 971	13 219	16 765	19 826	13 993	66 487	35 464	139 464
Foreign born	52 264	26 335	872	443	1 396	528	5 546	1 207	9 964
LANGUAGE SPOKEN AT HOME AND ABILITY TO SPEAK ENGLISH									
Linguistically isolated households	7 811	3 605	113	121	251	116	625	362	1 195
Persons 5 years and over	**1 143 255**	**415 350**	**12 862**	**16 004**	**19 188**	**13 698**	**66 186**	**33 637**	**140 737**
In linguistically isolated households	16 791	8 098	372	258	588	175	1 576	767	2 516
Speak a language other than English	96 115	45 599	1 629	1 513	2 551	977	8 731	3 251	14 623
Do not speak English "very well"	36 885	17 302	722	500	1 133	340	3 213	1 339	5 395
Speak Spanish	42 886	21 265	588	773	678	461	5 920	801	7 534
Do not speak English "very well"	17 702	8 541	272	256	307	222	2 370	385	3 033
Linguistically isolated	7 342	3 672	107	129	131	134	1 155	153	1 324
Speak an Asian or Pacific Island language	15 352	6 964	436	117	760	49	595	470	1 863
Do not speak English "very well"	8 321	3 612	207	78	402	–	242	383	939
Linguistically isolated	5 168	2 306	161	43	294	–	97	345	709
SCHOOL ENROLLMENT AND TYPE OF SCHOOL									
Persons 3 years and over enrolled in school	**347 171**	**119 881**	**4 433**	**3 995**	**5 884**	**2 668**	**20 870**	**10 739**	**36 419**
Preprimary school	25 084	9 030	239	142	363	195	1 947	602	3 026
Public school	10 527	3 056	100	92	167	75	642	336	741
Elementary or high school	237 365	81 876	3 526	2 996	4 318	1 598	14 597	8 310	21 339
Public school	178 094	53 653	2 629	2 477	3 335	1 087	9 437	6 884	10 194
College	84 722	28 975	668	857	1 203	875	4 326	1 827	12 054
Public college	54 134	20 115	522	623	857	483	3 126	1 284	8 231
EDUCATIONAL ATTAINMENT									
Persons 25 years and over	[illegible]	[illegible]	7 281	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1 650	[illegible]	[illegible]	[illegible]
[illegible] 12th grade, no diploma	[illegible]	336	1 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
High school graduate, no degree	149 981	58 866	1 551	1 898	2 504	2 071	9 157	3 152	23 632
Associate degree	31 581	12 884	444	305	482	460	2 103	781	4 750
Bachelor's degree	97 695	36 122	598	601	1 144	1 311	6 474	764	16 785
Graduate or professional degree	53 869	16 970	145	294	356	695	2 694	368	8 872
Percent high school graduate or higher	72.3	76.0	73.1	60.2	68.4	71.5	77.5	60.3	83.1
Percent bachelor's degree or higher	19.7	18.8	9.6	8.0	12.1	18.8	21.3	5.4	24.9
FERTILITY									
Children ever born per 1,000 women 15 to 24 years	360	299	422	463	515	344	291	410	179
Children ever born per 1,000 women 25 to 34 years	1 377	1 287	1 661	1 371	1 450	844	1 367	1 710	970
Children ever born per 1,000 women 35 to 44 years	2 047	1 989	2 364	2 291	2 138	1 642	2 068	2 299	1 694
RESIDENCE IN 1985									
Persons 5 years and over	**1 143 255**	**415 350**	**12 862**	**16 004**	**19 188**	**13 698**	**66 186**	**33 637**	**140 737**
Same house	655 361	246 872	8 106	8 957	10 496	7 793	35 866	21 573	87 768
Different house in United States	477 624	164 352	4 617	6 972	8 470	5 814	29 548	11 810	51 160
Central city of this MSA/PMSA	193 695	25 683	514	1 130	1 426	1 342	3 048	1 448	9 761
Remainder of this MSA/PMSA	185 282	107 132	3 590	4 783	5 627	3 292	19 671	9 082	30 944
Different MSA/PMSA	74 373	23 190	321	558	945	918	5 210	796	8 322
Not in an MSA/PMSA	24 274	8 347	192	501	472	262	1 619	484	2 133
Abroad	10 270	4 126	139	75	222	91	772	254	1 809
URBAN, RURAL, AND FARM RESIDENCE									
Urban population	1 154 142	441 633	14 091	17 208	21 222	14 521	72 033	36 671	149 428
In housing units on properties of less than 1 acre	757 892	320 053	12 655	10 330	13 186	9 463	51 690	26 859	105 987
Rural population	84 674	6 673	–	–	–	–	–	–	–
In housing units on properties of less than 1 acre	46 746	5 448	–	–	–	–	–	–	–
On farms	942	47	–	–	–	–	–	–	–
JOURNEY TO WORK									
Workers 16 years and over	**514 726**	**205 405**	**6 085**	**6 034**	**8 828**	**7 062**	**34 306**	**13 641**	**74 408**
Car, truck, or van	443 696	190 034	5 845	5 226	8 068	6 201	31 909	12 387	69 371
Drove alone	364 978	160 828	4 753	4 396	6 472	5 230	27 441	9 992	60 094
Carpooled	78 718	29 206	1 092	830	1 596	971	4 468	2 395	9 277
Public transportation (including taxicab)	37 337	4 826	65	265	252	291	808	546	1 430
Bus or trolley bus or streetcar or trolley car	35 282	4 152	56	188	209	268	716	482	1 157
Subway or elevated, railroad, or ferryboat	566	53	–	34	–	–	–	10	9
Walked	15 916	4 190	54	316	237	349	543	304	1 331
Other means	8 900	3 166	82	188	190	118	405	243	871
Worked at home	8 877	3 189	39	39	81	103	641	161	1 405
Persons per car, truck, or van	1.11	1.09	1.11	1.10	1.12	1.09	1.08	1.12	1.08
Mean travel time to work (minutes)	24.4	22.8	26.0	20.3	22.1	20.2	25.0	22.7	21.3
Departure time for work:									
5:00 a.m. to 5:59 a.m.	33 720	12 033	615	412	684	262	2 312	1 214	2 352
6:00 a.m. to 6:59 a.m.	109 680	42 400	1 526	1 166	1 985	1 334	7 363	3 528	12 390
7:00 a.m. to 7:59 a.m.	153 924	64 504	1 755	1 869	2 573	2 372	10 403	3 731	25 218
8:00 a.m. to 8:59 a.m.	89 044	37 041	827	1 018	1 445	1 340	6 058	1 693	16 537
All other times	119 481	46 238	1 323	1 530	2 060	1 651	7 529	3 314	16 506
Worked in MSA of residence	492 656	196 026	5 489	5 641	7 985	6 955	33 475	12 855	72 685
New Orleans city	244 338	61 549	1 226	1 512	2 454	2 426	8 887	2 713	27 101
Kenner city	22 827	17 028	74	70	124	275	8 868	239	5 638
Gretna city	11 603	9 556	514	1 717	900	46	186	1 254	601
Remainder of Jefferson Parish	139 611	101 978	3 532	2 280	4 365	4 008	13 980	8 301	37 424
Slidell city	13 680	319	–	–	18	18	59	9	138
Covington city	6 567	145	–	–	–	15	47	6	56
Remainder of St. Tammany Parish	16 443	235	–	–	8	–	84	–	74
St. Bernard Parish	13 576	991	13	16	26	28	177	43	415
St. Charles Parish	15 033	3 438	130	46	90	126	885	236	933
St. John the Baptist Parish	8 978	787	–	–	–	13	302	54	305
Worked outside MSA of residence	22 070	9 379	596	393	843	107	831	786	1 723
Plaquemines Parish	7 981	5 083	348	236	616	21	51	629	326
Hancock County, MS	1 109	33	–	–	8	–	–	–	25
Harrison County, MS	538	154	–	–	15	6	38	–	90
Tangipahoa Parish	874	139	–	10	–	–	36	–	44
Washington Parish	406	34	–	–	–	–	–	–	13
Terrebonne Parish	430	234	32	12	7	7	8	16	65
Lafourche Parish	445	178	–	20	–	–	3	7	47
Baton Rouge city	1 544	449	14	4	17	7	113	–	175
Remainder of Baton Rouge, LA MSA	755	370	–	12	22	30	97	–	116
St. James Parish	1 079	147	12	–	–	–	62	–	45
Worked elsewhere	6 909	2 558	190	99	158	36	423	[illegible]	[illegible]

Table 17. Social Characteristics of Persons: 1990—Con.

[Data based on sample and subject to sampling variability, see text. For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	Jefferson Parish—Con.			Orleans Parish		St. Bernard Parish		St. Charles Parish	St. John the Baptist Parish	
	Terrytown CDP	Timberlane CDP	Westwego city	Total	New Orleans city	Total	Chalmette CDP		Total	Laplace CDP
PLACE OF BIRTH										
All persons	**23 787**	**12 614**	**11 218**	**496 938**	**496 938**	**66 631**	**31 860**	**42 437**	**39 996**	**24 194**
Native	22 004	11 694	10 994	476 154	476 154	65 215	31 122	41 906	39 273	23 622
Foreign born	1 783	920	224	20 784	20 784	1 416	738	531	723	572
LANGUAGE SPOKEN AT HOME AND ABILITY TO SPEAK ENGLISH										
Linguistically isolated households	202	76	73	3 399	3 399	211	91	123	170	103
Persons 5 years and over	**21 749**	**11 785**	**10 287**	**458 579**	**458 579**	**61 684**	**29 731**	**38 541**	**36 176**	**21 706**
In linguistically isolated households	438	182	106	7 215	7 215	404	215	226	323	177
Speak a language other than English	2 774	1 385	1 315	35 974	35 974	3 697	1 652	2 613	2 215	1 302
Do not speak English "very well"	1 217	467	375	14 995	14 995	1 332	603	869	768	425
Speak Spanish	1 538	636	266	16 632	16 632	1 453	658	790	680	451
Do not speak English "very well"	726	172	84	7 381	7 381	632	292	267	256	153
Linguistically isolated	233	99	8	3 154	3 154	163	111	71	119	33
Speak an Asian or Pacific Island language	436	398	18	7 334	7 334	364	204	83	101	88
Do not speak English "very well"	221	163	18	4 285	4 285	106	42	52	44	38
Linguistically isolated	149	6	13	2 648	2 648	28	–	34	37	37
SCHOOL ENROLLMENT AND TYPE OF SCHOOL										
Persons 3 years and over enrolled in school	**6 890**	**3 663**	**2 553**	**146 515**	**146 515**	**16 387**	**8 009**	**11 898**	**11 725**	**7 139**
Preprimary school	426	195	136	9 270	9 270	1 087	527	1 261	1 038	765
Public school	137	53	87	4 980	4 980	349	140	568	389	258
Elementary or high school	4 420	2 544	2 022	95 293	95 293	11 845	5 717	8 792	9 147	5 356
Public school	2 732	1 521	1 711	75 984	75 984	8 325	3 431	7 724	6 405	3 450
[illegible]	[illegible]	[illegible]	[illegible]	41 952	41 952	3 455	1 765	1 845	1 540	1 018
[illegible]	[illegible]	634	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	303 065	[illegible]	[illegible]	20 341	25 442	22 773	13 [illegible]
[illegible]	813	537	1 967	40 [illegible]	[illegible]	7 648	3 510	3 897	3 631	1 758
Less than 9th grade	1 624	794	1 425	56 804	56 804	16 427	7 947	9 116	8 770	5 222
9th to 12th grade, no diploma	5 042	2 242	2 470	71 889	71 889	7 306	3 948	4 912	4 068	2 981
High school graduate (includes equivalency)	3 594	1 832	588	55 788	55 788	1 361	690	1 055	863	671
Some college, no degree	797	483	159	11 729	11 729	2 185	1 231	2 925	1 882	1 468
Associate degree	1 633	1 171	214	40 514	40 514	862	530	828	710	485
Bachelor's degree	766	536	62	27 937	27 937	67.2	70.5	74.0	71.5	78.8
Graduate or professional degree	82.9	82.5	50.7	68.1	68.1	7.3	8.7	14.8	11.4	14.2
Percent high school graduate or higher	16.8	22.5	4.0	22.4	22.4					
Percent bachelor's degree or higher										
FERTILITY										
Children ever born per 1,000 women 15 to 24 years	327	182	461	409	409	373	372	465	377	349
Children ever born per 1,000 women 25 to 34 years	1 439	1 093	1 562	1 367	1 367	1 523	1 433	1 494	1 661	1 672
Children ever born per 1,000 women 35 to 44 years	1 932	2 242	2 625	2 051	2 051	2 102	1 918	2 261	2 313	2 289
RESIDENCE IN 1985										
Persons 5 years and over	**21 749**	**11 785**	**10 287**	**458 579**	**458 579**	**61 684**	**29 731**	**38 541**	**36 176**	**21 706**
Same house	11 095	6 599	5 647	250 867	250 867	40 299	19 963	23 707	23 226	12 092
Different house in United States	10 360	5 068	4 614	203 051	203 051	20 999	9 583	14 657	12 856	9 520
Central city of this MSA/PMSA	2 115	922	111	149 723	149 723	3 214	1 606	687	601	379
Remainder of this MSA/PMSA	5 782	2 635	4 149	13 281	13 281	15 796	7 069	10 608	9 290	6 894
Different MSA/PMSA	1 501	1 102	269	31 926	31 926	1 283	683	2 572	1 775	1 430
Not in an MSA/PMSA	962	409	85	8 121	8 121	706	225	790	1 190	817
Abroad	294	118	26	4 661	4 661	386	185	177	94	94
URBAN, RURAL, AND FARM RESIDENCE										
Urban population	23 787	12 614	11 218	496 738	496 738	63 663	31 860	37 820	38 905	24 194
In housing units on properties of less than 1 acre	14 939	9 506	7 787	265 014	265 014	53 464	26 242	30 602	32 329	20 774
Rural population	–	–	–	200	200	2 968	–	4 617	1 091	–
In housing units on properties of less than 1 acre	–	–	–	143	143	2 020	–	3 900	679	–
On farms	–	–	–	27	27	19	–	18	15	–
JOURNEY TO WORK										
Workers 16 years and over	**11 321**	**6 211**	**4 101**	**186 926**	**186 926**	**27 517**	**13 854**	**17 593**	**15 733**	**10 503**
Car, truck, or van	10 338	5 698	3 771	138 280	138 280	25 893	13 056	16 673	14 900	10 066
Drove alone	8 482	4 732	3 046	109 458	109 458	21 193	10 824	14 334	12 734	8 694
Carpooled	1 856	966	725	28 822	28 822	4 700	2 232	2 339	2 166	1 372
Public transportation (including taxicab)	493	215	54	31 601	31 601	343	136	143	109	21
Bus or trolley bus or streetcar or trolley car	445	215	47	30 404	30 404	262	107	137	104	16
Subway or elevated, railroad, or ferryboat	–	–	–	477	477	30	–	–	–	–
Walked	179	87	123	9 762	9 762	488	273	266	317	185
Other means	228	68	121	3 718	3 718	435	205	318	277	151
Worked at home	83	143	32	3 565	3 565	358	184	193	130	80
Persons per car, truck, or van	1.11	1.10	1.11	1.13	1.13	1.11	1.10	1.08	1.09	1.08
Mean travel time to work (minutes)	21.0	21.5	22.1	23.7	23.7	27.0	24.8	25.7	24.9	26.0
Departure time for work:										
5:00 a.m. to 5:59 a.m.	598	446	543	10 198	10 198	2 364	1 018	1 843	1 906	1 151
6:00 a.m. to 6:59 a.m.	2 390	1 334	1 157	34 263	34 263	7 643	3 543	5 311	4 432	2 872
7:00 a.m. to 7:59 a.m.	3 431	1 855	950	55 909	55 909	7 915	4 223	5 149	4 048	2 734
8:00 a.m. to 8:59 a.m.	2 005	990	410	34 597	34 597	3 882	2 122	1 890	1 958	1 446
All other times	2 814	1 443	1 009	48 394	48 394	5 355	2 764	3 207	3 259	2 220
Worked in MSA of residence	10 268	5 494	3 813	182 262	182 262	26 515	13 519	16 740	14 324	9 665
New Orleans city	4 432	2 121	386	151 738	151 738	12 712	6 606	1 922	1 381	1 144
Kenner city	106	81	117	2 433	2 433	340	164	1 258	1 134	900
Gretna city	1 694	795	328	1 680	1 680	107	65	69	53	40
Remainder of Jefferson Parish	3 855	2 376	2 862	23 041	23 041	2 823	1 480	4 375	2 416	1 927
Slidell city	–	13	–	348	348	79	42	–	9	9
Covington city	–	7	–	100	100	34	24	–	11	11
Remainder of St. Tammany Parish	22	11	–	190	190	79	36	15	14	14
St. Bernard Parish	53	12	18	1 759	1 759	10 186	5 020	44	47	21
St. Charles Parish	84	72	90	748	748	125	60	8 344	2 099	1 403
St. John the Baptist Parish	22	6	12	225	225	30	22	713	7 160	4 196
Worked outside MSA of residence	1 053	717	288	4 664	4 664	1 002	335	853	1 409	838
Plaquemines Parish	810	664	139	1 690	1 690	679	176	106	61	55
Hancock County, MS	–	–	–	81	81	–	–	–	6	–
Harrison County, MS	–	–	–	45	45	13	6	21	–	–
Tangipahoa Parish	10	8	–	47	47	14	8	7	92	78
Washington Parish	–	–	21	7	7	–	–	–	12	12
Terrebonne Parish	8	15	10	35	35	–	–	100	12	12
[illegible]	–	–	20	88	88	17	3	92	36	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	439	439	32	20	53	146	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	91	81	20	15	87	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table 9. Occupancy, Utilization, and Financial Characteristics of Housing Units: 1990

[For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	New Orleans, LA MSA	Jefferson Parish							
		Total	Estelle CDP	Gretna city	Harvey CDP	Jefferson CDP	Kenner city	Marrero CDP	Metairie CDP	River Ridge CDP
All housing units	**524 056**	**185 072**	**4 365**	**7 987**	**9 406**	**7 667**	**27 259**	**13 220**	**67 021**	**6 194**
TENURE BY RACE AND HISPANIC ORIGIN OF HOUSEHOLDER										
Occupied housing units	455 178	166 398	4 114	6 616	7 462	6 796	25 056	12 048	61 907	5 712
Owner-occupied housing units	264 053	104 611	3 582	3 373	4 125	3 417	14 740	8 328	37 842	4 119
Percent of occupied housing units	58.0	62.9	87.1	51.0	55.3	50.3	58.8	69.1	61.1	72.1
White	201 521	90 541	3 005	2 723	3 077	3 070	12 630	5 244	36 339	3 880
Black	57 548	11 405	392	607	858	326	1 615	2 895	885	209
American Indian, Eskimo, or Aleut	701	330	32	6	14	2	40	35	55	5
Asian or Pacific Islander	2 725	1 563	102	19	147	9	225	111	388	14
Other race	1 558	772	51	18	29	10	230	43	175	11
Hispanic origin (of any race)	9 132	4 563	177	103	156	122	1 125	226	1 442	113
White, not of Hispanic origin	194 442	86 865	2 885	2 643	2 962	2 959	11 757	5 077	35 084	3 778
Renter-occupied housing units	191 125	61 787	532	3 243	3 337	3 379	10 316	3 720	24 065	1 593
White	102 035	46 565	427	1 847	1 629	2 770	7 526	1 925	21 097	1 257
Black	83 286	12 745	72	1 282	1 563	531	2 371	1 702	1 851	306
American Indian, Eskimo, or Aleut	568	250	8	12	24	9	41	16	62	7
Asian or Pacific Islander	2 775	1 086	23	47	69	36	112	58	507	6
Other race	2 461	1 141	2	55	52	33	266	19	548	17
Hispanic origin (of any race)	8 818	4 126	27	174	140	171	1 036	86	1 874	52
White, not of Hispanic origin	96 525	43 766	403	1 743	1 571	2 632	6 791	1 875	19 819	1 222
VACANCY STATUS										
Vacant housing units	**68 878**	**18 674**	**251**	**1 371**	**1 944**	**871**	**2 203**	**1 172**	**5 114**	**482**
For sale only	8 290	2 374	113	169	110	128	313	217	609	40
[illegible]	8 033	1 227	[illegible]	[illegible]	77	[illegible]	162	138	406	40
[illegible]	4 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	89	43	–	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	–
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Boarded up	4 545	1 284	20	92	400	27	133	126	165	65
ROOMS										
1 room	7 465	2 578	2	159	127	141	392	247	1 278	29
2 rooms	24 121	7 705	27	527	379	574	1 247	524	3 236	193
3 rooms	66 766	21 895	176	1 423	1 417	1 449	2 898	1 420	8 116	788
4 rooms	114 429	34 493	273	2 015	2 708	2 035	5 195	2 283	11 836	805
5 rooms	113 080	39 109	1 564	1 831	2 015	1 601	5 842	3 560	11 983	982
6 rooms	90 934	37 599	1 341	1 113	1 384	1 086	5 618	3 022	13 557	1 300
7 rooms	51 943	21 679	617	501	756	489	3 158	1 373	8 448	929
8 or more rooms	55 318	20 014	365	418	620	292	2 909	791	8 567	1 168
Median all housing units	4.9	5.2	5.6	4.4	4.5	4.3	5.2	5.1	5.3	5.7
Mean, all housing units	5.1	5.2	5.7	4.6	4.8	4.5	5.3	5.1	5.3	5.8
Median occupied housing units	5.1	5.3	5.6	4.6	4.8	4.4	5.3	5.1	5.4	5.9
Median, owner-occupied housing units	5.9	6.0	5.7	5.4	5.7	5.4	6.1	5.6	6.2	6.4
Median, renter-occupied housing units	4.0	3.9	5.2	3.7	3.9	3.6	4.0	4.0	3.8	3.6
UNITS IN STRUCTURE										
1, detached	277 720	114 515	4 010	4 306	4 717	3 645	15 814	9 670	39 584	4 414
1, attached	55 461	8 517	58	837	528	877	1 562	550	2 444	93
2	39 019	7 678	66	834	268	403	1 045	703	3 218	134
3 or 4	39 211	12 898	28	433	1 400	334	2 653	434	4 403	249
5 to 9	24 877	7 318	3	305	920	387	1 270	328	2 048	66
10 to 19	22 961	9 320	2	557	687	690	1 276	444	3 385	171
20 to 49	17 894	9 865	–	250	453	731	1 971	92	4 813	760
50 or more	21 752	9 237	–	231	298	474	808	473	6 163	136
Mobile home or trailer	18 954	3 831	167	132	69	51	532	358	253	148
Other	6 207	1 893	31	102	66	75	328	168	710	23
Occupied housing units	**455 178**	**166 398**	**4 114**	**6 616**	**7 462**	**6 796**	**25 056**	**12 048**	**61 907**	**5 712**
PERSONS IN UNIT										
1 person	120 270	41 468	396	2 015	1 735	2 708	5 459	2 435	18 635	1 390
2 persons	127 683	47 944	794	2 015	1 960	2 301	6 480	2 976	19 765	1 860
3 persons	82 387	31 116	998	1 154	1 505	874	4 935	2 465	10 365	1 000
4 persons	69 458	26 643	1 057	773	1 237	558	4 756	2 147	8 197	898
5 persons	33 260	12 117	556	351	605	242	2 167	1 099	3 375	400
6 or more persons	22 120	7 110	313	308	420	113	1 259	926	1 570	164
Median occupied housing units	2.34	2.37	3.37	2.14	2.52	1.80	2.62	2.75	2.12	2.29
Median owner-occupied housing units	2.53	2.62	3.33	2.19	2.66	1.99	2.99	2.85	2.38	2.48
Median renter-occupied housing units	2.04	1.96	3.61	2.07	2.37	1.57	2.14	2.49	1.63	1.63
PERSONS PER ROOM										
.50 or less	427 962	158 583	3 836	6 072	6 851	6 586	23 613	11 106	60 270	5 570
.51 to 1.50	18 101	5 181	196	342	416	147	973	624	987	90
1.51 or more	9 115	2 634	82	202	195	63	470	318	650	52
Mean	.51	.50	.60	.53	.57	.45	.53	.59	.44	.44
VALUE										
Specified owner-occupied housing units	**221 017**	**92 961**	**3 256**	**2 966**	**3 704**	**2 914**	**13 092**	**7 427**	**33 717**	**3 777**
Less than $20,000	4 341	1 111	17	109	86	48	101	163	167	25
$20,000 to $39,999	18 157	6 421	305	619	482	152	569	1 104	675	78
$40,000 to $59,999	53 999	22 231	1 649	1 171	1 287	828	3 356	3 409	3 594	284
$60,000 to $79,999	65 759	28 739	720	624	1 211	1 284	3 435	2 112	10 222	1 018
$80,000 to $99,999	33 577	16 002	310	236	477	402	2 506	408	8 389	852
$100,000 to $149,999	26 480	11 298	149	166	142	174	1 961	165	6 584	836
$150,000 to $199,999	9 460	3 688	57	25	13	19	588	52	2 028	373
$200,000 to $249,999	3 636	1 438	27	9	1	4	287	9	754	138
$250,000 to $299,999	2 172	805	10	5	3	2	126	2	464	78
$300,000 or more	3 436	1 228	12	2	2	1	163	3	840	95
Median (dollars)	69 800	71 400	54 500	51 700	59 900	65 800	74 000	53 900	84 900	90 500
Mean (dollars)	84 600	84 600	65 000	57 900	61 800	68 200	88 600	56 700	103 700	113 600
CONTRACT RENT										
Specified renter-occupied housing units	**188 176**	**61 175**	**516**	**3 196**	**3 305**	**3 344**	**10 218**	**3 651**	**23 890**	**1 584**
Median contract rent (dollars)	301	332	366	255	283	325	347	231	360	322
Mean contract rent (dollars)	311	345	368	252	284	347	362	231	381	344
No cash rent	1 122	241	3	2	7	7	137	17	53	1
Mean contract rent (dollars)	388	310	171	350	237	471	285	329	344	387
Utilities included in rent	179 219	58 639	497	2 969	3 184	3 200	9 861	3 367	23 154	1 524
[illegible]	[illegible]	2 295	[illegible]	225	114	137	220	267	683	59

Table 9. Occupancy, Utilization, and Financial Characteristics of Housing Units: 1990—Con.

[For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	Jefferson Parish—Con.			Orleans Parish		St. Bernard Parish			St. John the Bac
	Terrytown CDP	Timberlane CDP	Westwego city	Total	New Orleans city	Total	Chalmette CDP	St. Charles Parish	Total
All housing units	**9 726**	**4 499**	**4 690**	**225 573**	**225 573**	**25 147**	**12 380**	**16 016**	**14 255**
TENURE BY RACE AND HISPANIC ORIGIN OF HOUSEHOLDER									
Occupied housing units	8 582	4 268	4 216	188 235	188 235	23 156	11 461	14 333	12 710
Owner-occupied housing units	4 495	2 814	2 387	82 279	82 279	17 556	7 976	11 302	10 128
Percent of occupied housing units	52.4	65.9	56.6	43.7	43.7	75.8	69.6	78.9	79.7
White	4 120	2 335	2 170	43 432	43 432	16 757	7 880	9 073	7 072
Black	231	351	179	37 345	37 345	566	10	2 111	2 939
American Indian, Eskimo, or Aleut	19	9	20	122	122	70	18	24	23
Asian or Pacific Islander	89	84	10	884	884	101	46	33	30
Other race	36	35	8	496	496	62	22	61	64
Hispanic origin (of any race)	312	142	55	2 364	2 364	1 051	294	237	238
White, not of Hispanic origin	3 850	2 234	2 123	41 920	41 920	15 778	7 612	8 910	6 903
Renter-occupied housing units	4 087	1 454	1 829	105 956	105 956	5 600	3 485	3 031	2 582
White	2 569	1 128	1 402	36 764	36 764	5 174	3 376	1 924	1 409
Black	1 336	264	373	66 250	66 250	289	13	1 065	1 151
American Indian, Eskimo, or Aleut	22	7	16	208	208	30	16	8	6
Asian or Pacific Islander	85	45	11	1 542	1 542	68	49	14	6
Other race	75	10	27	1 192	1 192	39	31	20	10
Hispanic origin (of any race)	294	60	53	3 923	3 923	356	221	79	49
White, not of Hispanic origin	2 369	1 084	1 376	34 660	34 660	4 871	3 192	1 877	1 373
VACANCY STATUS									
Vacant housing units	**1 144**	**231**	**474**	**37 338**	**37 338**	**1 591**	**919**	**1 683**	**1 545**
For sale only	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	228	114	286	312
Rented or sold, not occupied	[illegible]	[illegible]	[illegible]	17 043	17 043	612	421	589	457
For seasonal, recreational, or occasional use	[illegible]	[illegible]	[illegible]	5 762	5 762	170	49	125	145
For migrant workers	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	64	14	—	[illegible]
Other vacant	—	—	1	33	33	1	1	—	1
Boarded up	85	55	168	9 247	9 247	635	256	519	480
	30	15	27	2 831	2 831	114	53	87	76
ROOMS									
1 room	75	21	39	4 329	4 329	51	30	84	52
2 rooms	224	83	214	13 772	13 772	547	261	311	357
3 rooms	1 377	424	772	37 643	37 643	1 399	675	1 124	910
4 rooms	1 575	575	1 345	57 996	57 996	5 712	3 288	2 811	2 537
5 rooms	1 875	785	1 183	45 319	45 319	7 774	3 204	3 731	3 988
6 rooms	2 018	894	719	29 536	29 536	5 524	2 675	3 613	3 214
7 rooms	1 407	779	249	15 921	15 921	2 526	1 329	2 231	1 694
8 or more rooms	1 175	938	169	21 057	21 057	1 614	918	2 111	1 503
Median, all housing units	5.4	5.9	4.5	4.5	4.5	5.1	5.1	5.5	5.3
Mean, all housing units	5.4	5.9	4.6	4.8	4.8	5.3	5.3	5.6	5.5
Median, occupied housing units	5.5	6.0	4.5	4.7	4.7	5.2	5.2	5.6	5.4
Median, owner-occupied housing units	6.5	6.7	5.1	6.0	6.0	5.5	5.7	5.9	5.7
Median, renter-occupied housing units	4.2	4.2	3.8	3.9	3.9	4.2	4.1	4.3	4.3
UNITS IN STRUCTURE									
1, detached	4 967	3 034	2 754	82 772	82 772	17 265	8 070	11 413	10 454
1, attached	482	120	269	43 248	43 248	1 588	1 047	439	257
2	165	81	520	27 844	27 844	1 386	966	336	464
3 or 4	1 359	58	290	21 821	21 821	1 099	802	764	634
5 to 9	905	495	134	15 056	15 056	717	532	596	183
10 to 19	867	272	274	12 159	12 159	356	279	121	166
20 to 49	503	48	119	7 035	7 035	134	134	159	3
50 or more	386	268	—	11 908	11 908	—	—	—	103
Mobile home or trailer	8	102	248	840	840	2 182	453	2 070	1 830
Other	84	21	82	2 890	2 890	420	97	118	161
Occupied housing units	**8 582**	**4 268**	**4 216**	**188 235**	**188 235**	**23 156**	**11 461**	**14 333**	**12 710**
PERSONS IN UNIT									
1 person	1 837	789	1 028	60 673	60 673	4 230	2 248	2 520	2 060
2 persons	2 419	1 171	1 231	51 001	51 001	6 685	3 391	3 882	3 012
3 persons	1 833	912	853	30 721	30 721	4 964	2 458	3 027	2 583
4 persons	1 472	798	632	23 318	23 318	4 370	2 059	2 905	2 791
5 persons	650	374	289	12 153	12 153	1 917	891	1 325	1 391
6 or more persons	371	224	183	10 369	10 369	990	414	674	873
Median, occupied housing units	2.52	2.69	2.38	2.16	2.16	2.63	2.54	2.75	3.00
Median, owner-occupied housing units	2.68	3.05	2.37	2.30	2.30	2.71	2.64	2.83	3.06
Median, renter-occupied housing units	2.36	2.06	2.38	2.01	2.01	2.40	2.34	2.47	2.73
PERSONS PER ROOM									
1.00 or less	8 175	4 109	3 931	173 343	173 343	22 030	11 007	13 650	11 856
1.01 to 1.50	272	112	189	9 521	9 521	886	365	502	599
1.51 or more	135	47	96	5 371	5 371	240	89	181	255
Mean	.50	.49	.57	.52	.52	.53	.52	.51	.56
VALUE									
Specified owner-occupied housing units	**4 127**	**2 575**	**1 993**	**67 166**	**67 166**	**14 645**	**6 973**	**9 124**	**8 228**
Less than $20,000	8	5	99	1 645	1 645	155	33	324	344
$20,000 to $39,999	115	73	486	6 609	6 609	1 046	323	886	853
$40,000 to $59,999	1 015	613	817	16 097	16 097	5 104	2 037	2 200	2 593
$60,000 to $79,999	2 027	1 111	369	18 655	18 655	5 639	3 086	2 681	2 733
$80,000 to $99,999	802	378	160	9 270	9 270	1 746	975	1 335	963
$100,000 to $149,999	145	122	55	7 542	7 542	688	372	1 090	560
$150,000 to $199,999	8	105	6	3 240	3 240	165	81	382	127
$200,000 to $249,999	3	67	1	1 436	1 436	49	33	118	24
$250,000 to $299,999	1	48	—	953	953	30	17	60	14
$300,000 or more	3	53	—	1 719	1 719	23	16	48	17
Median (dollars)	69 400	71 000	49 000	69 200	69 200	63 100	66 400	67 600	62 000
Mean (dollars)	70 300	89 300	52 000	89 100	89 100	67 000	70 700	77 700	66 000
CONTRACT RENT									
Specified renter-occupied housing units	**4 052**	**1 444**	**1 803**	**104 196**	**104 196**	**5 522**	**3 450**	**2 985**	**2 532**
Median contract rent (dollars)	339	402	256	273	273	294	305	292	270
Mean contract rent (dollars)	350	404	239	289	289	297	312	304	280
With meals included in rent	3	4	1	797	797	8	5	8	35
Mean contract rent (dollars)	475	387	263	431	431	266	278	201	[illegible]
No meals included in rent	3 923	1 402	1 685	99 932	99 932	5 179	3 294	[illegible]	[illegible]
No cash rent	126	38	117	3 467	3 467	335	[illegible]	[illegible]	[illegible]

Table 32. Selected Structural Characteristics of Housing Units: 1990

[Based on sample and subject to sampling variability, see text. For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	New Orleans, LA MSA	Jefferson Parish							
		Total	Estelle CDP	Gretna city	Harvey CDP	Jefferson CDP	Kenner city	Marrero CDP	Metairie CDP	River Ridge CDP
All housing units	**524 056**	**185 072**	**4 365**	**7 987**	**9 406**	**7 667**	**27 259**	**13 220**	**67 021**	**6 194**
YEAR STRUCTURE BUILT										
1990 to March 1990	4 110	1 218	31	–	150	133	217	–	206	55
1985 to 1988	29 906	9 199	603	144	486	679	1 546	597	1 869	120
1980 to 1984	61 848	21 972	551	229	1 598	1 025	5 179	1 564	4 785	339
1970 to 1979	117 099	57 371	2 178	1 127	2 583	537	12 137	3 769	20 033	1 709
1960 to 1969	95 530	47 463	827	1 826	1 966	531	4 597	3 331	21 736	1 775
1950 to 1959	76 788	27 808	85	2 204	1 035	2 064	2 522	2 063	11 659	1 861
1940 to 1949	50 656	12 306	63	911	858	1 876	718	1 163	4 604	216
1939 or earlier	88 119	7 735	27	1 546	730	822	343	733	2 129	119
BEDROOMS										
No bedroom	9 865	3 395	6	187	207	209	604	335	1 590	53
1 bedroom	84 185	27 174	96	1 720	2 040	2 048	3 389	1 761	10 478	1 081
2 bedrooms	165 463	49 254	359	2 868	3 317	3 381	6 994	3 067	17 469	1 077
3 bedrooms	194 465	77 974	3 181	2 697	2 903	1 708	11 659	6 520	27 822	2 658
4 bedrooms	59 416	24 023	696	456	860	287	3 984	1 353	8 170	1 057
5 bedrooms	10 662	3 252	27	59	79	34	629	184	1 492	268
6 or more bedrooms										
CONDOMINIUM HOUSING UNITS										
[illegible] housing units	4 212	2 300	–	–	100	344	588	7	1 086	–
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	153	712	89	1 407	–
[illegible]	[illegible]	920	–	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SELECTED STRUCTURAL CHARACTERISTICS										
Complete kitchen facilities	519 159	183 933	4 343	7 826	9 209	7 607	27 108	13 089	66 867	6 180
Source of water, public system or private company	500 123	184 802	4 352	7 987	9 344	7 657	27 214	13 176	66 974	6 174
Sewage disposal, public sewer	483 215	180 040	4 349	7 950	9 287	7 616	27 168	13 095	66 857	–
Lacking complete plumbing facilities	3 596	631	14	65	55	21	87	104	93	–
Owner-occupied housing units	925	181	14	6	9	–	18	41	36	–
Renter-occupied housing units	1 839	270	–	41	25	13	61	45	15	–
Occupied housing units	**455 178**	**166 398**	**4 114**	**6 616**	**7 462**	**6 796**	**25 056**	**12 048**	**61 907**	**5 712**
HOUSE HEATING FUEL										
Utility gas	272 984	95 361	2 463	4 693	3 770	4 077	11 311	7 491	37 655	3 939
Bottled, tank, or LP gas	10 016	1 857	46	59	69	61	376	224	461	59
Electricity	169 015	68 627	1 598	1 830	3 591	2 649	13 258	4 277	23 628	1 661
Fuel oil, kerosene, etc.	391	54	–	16	–	–	–	20	18	–
Coal or other fuels	1 299	139	7	–	6	–	24	7	38	7
No fuel used	1 473	360	–	18	26	9	87	29	107	46
VEHICLES AVAILABLE										
None	82 804	16 086	117	1 535	1 102	949	1 786	2 405	4 868	331
1	169 781	63 207	1 149	2 821	2 865	3 316	8 898	4 186	24 824	1 860
2	153 461	65 278	2 271	1 757	2 671	2 060	10 784	4 054	23 723	2 627
3 or more	49 132	21 827	577	503	824	471	3 588	1 403	8 492	894
Vehicles per household	1.4	1.6	1.8	1.2	1.5	1.3	1.7	1.4	1.6	1.8
YEAR HOUSEHOLDER MOVED INTO UNIT										
Owner-occupied housing units	**264 146**	**104 634**	**3 582**	**3 373**	**4 125**	**3 417**	**14 740**	**8 328**	**37 865**	**4 119**
1989 to March 1990	18 975	7 044	273	159	297	128	1 069	651	2 046	329
1985 to 1988	52 662	19 406	1 039	332	773	614	3 462	1 338	5 672	644
1980 to 1984	42 334	15 634	602	265	664	411	2 722	1 202	4 927	519
1970 to 1979	71 597	31 235	1 270	693	1 205	562	5 306	2 313	11 591	1 087
1969 or earlier	78 578	31 315	398	1 924	1 186	1 702	2 181	2 824	13 629	1 540
Renter-occupied housing units	**191 032**	**61 764**	**532**	**3 243**	**3 337**	**3 379**	**10 316**	**3 720**	**24 042**	**1 593**
1989 to March 1990	77 023	28 337	306	1 355	1 897	1 490	4 951	1 248	10 489	766
1985 to 1988	66 466	22 789	166	1 106	1 086	1 222	4 018	1 379	9 004	601
1980 to 1984	21 545	5 844	27	332	252	260	867	526	2 591	117
1970 to 1979	16 190	3 534	33	295	66	210	398	425	1 532	85
1969 or earlier	9 808	1 260	–	155	36	197	82	142	426	24
SELECTED CHARACTERISTICS										
No telephone in unit	27 303	6 643	90	708	673	344	1 073	828	1 301	121
Householder 65 years and over	93 476	30 521	231	1 833	1 082	1 951	2 779	2 386	14 171	1 156
Owner-occupied housing units	66 162	23 776	183	1 317	891	1 564	1 932	1 692	11 131	1 002
Lacking complete plumbing facilities	575	57	14	–	3	5	13	11	5	–
No telephone in unit	3 197	680	–	151	32	30	59	119	114	20
No vehicle available	29 472	6 804	29	570	323	452	625	966	2 560	215
Complete plumbing facilities	452 414	165 947	4 100	6 569	7 428	6 783	24 977	11 962	61 856	5 712
1.00 or less persons per room	426 362	158 536	3 847	6 067	6 793	6 528	23 732	10 975	60 400	5 527
1.01 or more persons per room	26 052	7 411	253	502	635	255	1 245	987	1 456	185
Lacking complete plumbing facilities	2 764	451	14	47	34	13	79	86	51	–
1.00 or less persons per room	2 228	353	14	26	25	13	69	55	40	–
1.01 or more persons per room	536	98	–	21	9	–	10	31	11	–
Mean household income in 1989:										
Owner-occupied housing units (dollars)	40 523	40 469	34 539	28 377	35 322	30 688	44 085	29 412	45 232	48 812
Renter-occupied housing units (dollars)	19 999	22 684	22 864	15 141	18 240	24 669	24 750	13 857	24 604	26 257
Household income in 1989 below poverty level	93 020	23 236	483	1 875	1 498	1 052	3 439	2 942	6 139	531
Owner-occupied housing units	28 853	8 784	360	480	474	371	1 080	1 224	2 196	282
Renter-occupied housing units	64 167	14 452	123	1 395	1 024	681	2 359	1 718	3 943	249

Table 32. Selected Structural Characteristics of Housing Units: 1990—Con.

[Data based on sample and subject to sampling variability, see text. For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	Jefferson Parish—Con.			Orleans Parish		St. Bernard Parish		St. Charles Parish	St. John the Baptist Parish	
	Terrytown CDP	Timberlane CDP	Westwego city	Total	New Orleans city	Total	Chalmette CDP		Total	Laplace CDP
All housing units	**9 726**	**4 499**	**4 690**	**225 573**	**225 573**	**25 147**	**12 380**	**16 016**	**14 255**	**8 42**
YEAR STRUCTURE BUILT										
1989 to March 1990	83	53	12	968	968	288	78	293	196	12
1985 to 1988	361	348	138	6 133	6 133	2 341	615	2 101	1 688	1 04
1980 to 1984	1 186	614	182	15 304	15 304	2 982	1 001	3 493	3 830	2 76
1970 to 1979	3 768	2 353	870	26 921	26 921	7 558	4 905	3 991	3 676	2 41
1960 to 1969	3 953	1 078	955	29 684	29 684	5 717	3 042	2 407	2 142	1 25
1950 to 1959	266	40	1 311	37 218	37 218	4 483	2 169	2 295	1 241	47
1940 to 1949	45	–	685	34 348	34 348	1 035	421	687	581	17
1939 or earlier	64	13	537	74 997	74 997	743	149	749	901	17
BEDROOMS										
No bedroom	96	26	10	5 714	5 714	102	34	80	114	10
1 bedroom	1 579	532	919	49 962	49 962	1 582	808	1 066	785	43
2 bedrooms	2 362	876	1 808	85 011	85 011	7 447	4 169	4 193	3 445	1 71
3 bedrooms	3 765	1 831	1 621	62 467	62 467	13 434	6 089	7 864	7 687	4 66
4 bedrooms	1 814	1 101	308	17 483	17 483	2 237	1 111	2 533	1 939	1 39
5 or more bedrooms	110	133	24	4 936	4 936	345	169	280	285	20
CONDOMINIUM HOUSING UNITS										
Owner-occupied condominium housing units	116	8	–	1 212	1 212	18	–	114	80	67
Renter-occupied condominium housing units	320	12	21	2 861	2 861	6	–	[illegible]	–	–
Vacant condominium housing units	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	38	7	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	9 693	4 494	4 645	222 742	222 742	24 938	12 286	15 867	14 192	8 40
Source of water, public system or private company	9 721	4 499	4 690	224 266	224 266	25 088	12 367	15 931	13 924	8 33
Sewage disposal, public sewer	9 546	4 431	4 690	221 846	221 846	23 322	12 286	14 745	11 545	8 01
Lacking complete plumbing facilities	25	–	47	2 074	2 074	136	22	222	126	46
Owner-occupied housing units	8	–	10	358	358	74	6	114	46	16
Renter-occupied housing units	17	–	8	1 356	1 356	12	–	59	49	14
Occupied housing units	**8 582**	**4 268**	**4 216**	**188 235**	**188 235**	**23 156**	**11 461**	**14 333**	**12 710**	**7 710**
HOUSE HEATING FUEL										
Utility gas	4 011	2 356	2 922	129 500	129 500	16 688	8 086	7 479	4 896	2 384
Bottled, tank, or LP gas	17	71	48	3 211	3 211	375	129	214	170	52
Electricity	4 541	1 841	1 246	54 014	54 014	6 021	3 238	6 597	7 592	5 259
Fuel oil, kerosene, etc.	–	–	–	154	154	8	–	5	–	–
All other fuels	6	–	–	397	397	28	8	16	17	6
No fuel used	7	–	–	959	959	36	–	22	35	9
VEHICLES AVAILABLE										
None	739	129	727	59 269	59 269	2 002	874	1 261	1 426	605
1	3 205	1 512	1 891	74 703	74 703	8 351	4 131	4 214	3 843	2 083
2	3 417	1 729	1 319	42 573	42 573	9 664	4 753	6 714	5 679	3 866
3 or more	1 221	898	279	11 690	11 690	3 139	1 703	2 144	1 762	1 156
Vehicles per household	1.6	1.8	1.3	1.1	1.1	1.6	1.7	1.7	1.6	1.8
YEAR HOUSEHOLDER MOVED INTO UNIT										
Owner-occupied housing units	**4 495**	**2 814**	**2 387**	**82 349**	**82 349**	**17 556**	**7 976**	**11 302**	**10 128**	**6 102**
1989 to March 1990	364	326	140	4 755	4 755	1 212	429	929	915	699
1985 to 1988	870	472	355	13 696	13 696	3 147	1 031	2 768	2 478	1 834
1980 to 1984	716	389	269	11 183	11 183	2 623	971	2 241	2 287	1 472
1970 to 1979	1 386	1 444	490	21 610	21 610	4 702	2 581	2 529	2 114	1 233
1969 or earlier	1 159	183	1 133	31 105	31 105	5 872	2 964	2 835	2 334	864
Renter-occupied housing units	**4 087**	**1 454**	**1 829**	**105 886**	**105 886**	**5 600**	**3 485**	**3 031**	**2 582**	**1 608**
1989 to March 1990	2 214	829	769	37 559	37 559	2 307	1 537	1 444	1 041	724
1985 to 1988	1 450	507	662	35 467	35 467	2 042	1 212	1 044	902	609
1980 to 1984	210	90	238	13 615	13 615	633	363	217	368	183
1970 to 1979	213	28	96	11 379	11 379	427	303	199	151	58
1969 or earlier	–	–	64	7 866	7 866	191	70	127	120	34
SELECTED CHARACTERISTICS										
No telephone in unit	284	27	323	15 023	15 023	828	253	899	1 325	571
Householder 65 years and over	874	379	1 129	46 057	46 057	4 745	2 374	2 064	1 954	916
Owner-occupied housing units	567	351	835	27 958	27 958	4 006	2 010	1 833	1 640	717
Lacking complete plumbing facilities	–	–	–	349	349	21	6	36	37	26
No telephone in unit	–	–	33	1 869	1 869	84	18	45	202	102
No vehicle available	172	36	324	19 410	19 410	914	392	444	586	271
Complete plumbing facilities	8 557	4 268	4 198	186 521	186 521	23 070	11 455	14 160	12 615	7 680
1.00 or less persons per room	8 090	4 121	3 903	172 209	172 209	21 930	10 993	13 529	11 835	7 325
1.01 or more persons per room	467	147	295	14 312	14 312	1 140	462	631	780	355
Lacking complete plumbing facilities	25	–	18	1 714	1 714	86	6	173	95	30
1.00 or less persons per room	25	–	8	1 332	1 332	86	6	153	84	30
1.01 or more persons per room	–	–	10	382	382	–	–	20	11	–
Mean household income in 1989:										
Owner-occupied housing units (dollars)	43 465	51 516	24 622	42 295	42 295	32 865	35 556	38 160	35 297	40 396
Renter-occupied housing units (dollars)	21 407	30 326	15 977	17 719	17 719	19 527	21 020	23 191	20 659	23 211
Household income in 1989 below poverty level	1 050	280	977	54 714	54 714	3 488	1 567	2 265	2 188	913
Owner-occupied housing units	192	142	325	11 343	11 343	1 907	670	1 413	1 277	441
Renter-occupied housing units	858	138	652	43 371	43 371	1 581	897	852	911	472

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Table 33. Financial Characteristics of Housing Units: 1990

[Data based on sample and subject to sampling variability, see text. For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	New Orleans, LA MSA	Jefferson Parish							
		Total	Estelle CDP	Gretna city	Harvey CDP	Jefferson CDP	Kenner city	Marrero CDP	Metairie CDP
Specified owner-occupied housing units	**226 263**	**95 128**	**3 323**	**3 042**	**3 789**	**2 945**	**13 414**	**7 579**	**34 668**
SELECTED MONTHLY OWNER COSTS									
With a mortgage	**150 442**	**66 567**	**2 864**	**1 386**	**2 521**	**1 272**	**11 394**	**5 231**	**22 066**
Less than $300	9 557	4 634	160	218	130	158	586	545	1 369
$300 to $399	15 454	7 518	341	205	266	80	1 043	746	2 632
$400 to $499	17 367	8 248	487	275	379	103	1 286	809	2 497
$500 to $599	18 677	8 303	558	195	435	218	1 024	823	2 534
$600 to $799	38 972	17 514	877	336	693	434	3 018	1 498	4 875
$800 to $999	24 554	10 542	317	98	479	202	2 120	570	3 632
$1,000 to $1,499	18 127	6 969	89	54	137	64	1 701	198	3 085
$1,500 to $1,999	4 338	1 572	29	5	–	13	349	29	704
$2,000 or more	3 396	1 267	6	–	2	–	267	13	738
Median (dollars)	670	648	581	498	614	631	713	564	681
Not mortgaged	**75 821**	**28 561**	**459**	**1 656**	**1 268**	**1 673**	**2 020**	**2 348**	**12 602**
Less than $100	6 744	2 542	24	214	86	219	161	258	946
$100 to $199	37 139	14 763	239	914	635	1 020	954	1 355	6 300
$200 to $299	21 758	8 118	136	405	411	371	644	530	3 832
$300 to $399	5 856	2 071	39	85	105	37	173	131	948
$400 to $499	2 085	554	16	38	20	14	46	43	268
$500 or more	2 239	513	5	–	11	12	42	31	308
Median (dollars)	185	181	188	171	186	160	192	172	186
HOUSEHOLD INCOME IN 1989 BY SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989									
Less than $20,000	63 548	23 872	813	1 285	1 110	1 103	2 768	2 647	8 048
Less than 20 percent	19 095	7 551	126	555	323	465	640	679	3 092
20 to 24 percent	6 217	2 396	37	74	90	198	[illegible]	[illegible]	[illegible]
25 to 29 percent	4 700	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30 to 34 percent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
35 percent or more	[illegible]	[illegible]	[illegible]	117	103	65	[illegible]	[illegible]	[illegible]
Not computed	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Median	[illegible]	[illegible]	[illegible]	77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] to $34,999	[illegible]	[illegible]	[illegible]	[illegible]	29.6	21.5	34.5	34.6	24.7
Less than 20 percent	34 605	24 438	1 093	902	925	853	3 220	2 282	8 285
20 to 24 percent	27 335	11 976	341	634	471	584	1 143	1 085	4 697
25 to 29 percent	6 925	3 222	221	120	131	121	462	292	1 028
30 to 34 percent	7 099	3 302	268	68	144	90	465	364	772
35 percent or more	5 537	2 750	148	63	84	28	552	259	731
Not computed	7 876	3 180	115	17	95	30	598	282	1 057
Median	33	8	–	–	–	–	–	–	–
$35,000 to $49,999	20.0	20.4	24.6	14.0	19.7	11.0	25.1	21.0	17.3
Less than 20 percent	44 949	20 313	786	413	734	494	3 273	1 576	7 069
20 to 24 percent	27 103	12 347	493	295	423	313	1 607	1 080	4 552
25 to 29 percent	9 682	4 394	200	103	149	125	958	346	1 151
30 to 34 percent	4 797	2 214	66	6	129	45	358	96	784
35 percent or more	1 726	704	14	5	31	5	159	26	319
Not computed	1 631	654	13	4	2	6	191	28	263
Median	10	–	–	–	–	–	–	–	–
$50,000 or more	17.4	17.3	17.6	13.1	18.1	16.6	20.2	16.3	15.6
Less than 20 percent	62 961	26 505	631	442	1 020	495	4 153	1 074	11 266
20 to 24 percent	50 734	21 858	545	432	942	463	3 041	1 003	9 146
25 to 29 percent	7 556	2 902	46	10	57	32	718	39	1 302
30 to 34 percent	2 542	937	27	–	21	–	245	19	388
35 percent or more	1 231	499	–	–	–	–	115	8	231
Not computed	872	304	13	–	–	–	34	–	199
Median	26	5	–	–	–	–	–	5	–
Specified renter-occupied housing units	13.4	13.0	12.4	10.0	12.5	11.4	15.7	11.0	12.3
GROSS RENT	**189 420**	**61 532**	**520**	**3 209**	**3 319**	**3 362**	**10 286**	**3 691**	**23 990**
Less than $100	8 550	885	–	32	36	–	81	282	98
$100 to $199	11 919	2 200	12	303	106	117	280	635	345
$200 to $299	24 630	6 567	29	834	617	498	1 010	732	1 708
$300 to $399	47 414	16 835	33	948	1 290	972	2 249	716	6 756
$400 to $499	43 592	16 054	107	552	705	737	2 850	582	7 300
$500 to $599	23 240	9 023	164	223	258	531	2 014	306	3 492
$600 to $749	14 129	5 175	118	78	115	294	958	129	2 523
$750 to $999	6 304	2 036	28	–	60	52	472	50	880
$1,000 or more	2 434	627	–	10	10	25	175	9	294
No cash rent	7 208	2 130	29	229	122	136	197	250	594
Median (dollars)	397	419	539	337	361	404	449	307	437
HOUSEHOLD INCOME IN 1989 BY GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989									
Less than $10,000	67 215	15 853	112	1 483	1 029	759	2 488	1 889	4 900
Less than 20 percent	2 733	352	–	11	13	–	24	118	77
20 to 24 percent	2 259	377	–	13	15	16	50	156	72
25 to 29 percent	3 222	438	–	18	57	18	35	112	70
30 to 34 percent	2 379	436	–	48	26	15	73	92	96
35 percent or more	47 265	12 060	106	1 164	806	583	1 981	1 169	3 803
Not computed	9 357	2 190	6	229	112	127	325	242	782
Median	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+
$10,000 to $19,999	47 375	16 171	140	746	990	866	2 561	851	6 350
Less than 20 percent	3 799	914	7	97	57	49	102	113	217
20 to 24 percent	5 946	2 246	8	135	306	134	234	144	771
25 to 29 percent	8 414	3 059	13	72	198	225	425	114	1 334
30 to 34 percent	8 403	3 148	10	188	158	178	522	176	1 248
35 percent or more	18 948	6 228	88	219	237	229	1 215	255	2 621
Not computed	1 865	576	14	35	34	51	63	49	159
Median	32.7	32.5	39.0	31.4	27.9	30.0	34.7	30.9	33.1
$20,000 to $34,999	44 262	17 416	180	665	962	974	2 822	678	7 290
Less than 20 percent	19 324	7 285	24	331	501	500	1 034	317	2 914
20 to 24 percent	11 948	5 133	47	155	244	250	827	154	2 293
25 to 29 percent	6 582	2 718	73	83	100	130	575	113	1 132
30 to 34 percent	2 933	1 221	24	22	74	55	201	22	577
35 percent or more	2 136	605	3	10	31	20	137	20	248
Not computed	1 339	454	9	64	12	19	48	52	126
Median	20.9	21.2	26.0	19.2	19.6	19.6	22.1	19.9	21.5
$35,000 or more	30 568	12 092	88	315	338	763	2 415	273	5 450
Less than 20 percent	25 623	10 233	53	279	304	665	2 105	216	4 597
20 to 24 percent	3 021	1 171	35	5	20	61	189	36	555
25 to 29 percent	696	266	–	–	–	–	80	5	124
30 to 34 percent	237	85	–	–	–	–	7	–	36
35 percent or more	182	69	–	–	–	5	21	–	36
Not computed	809	268	–	31	14	32	13	16	102
Median	14.0	14.2	16.5	11.2	13.0	13.7	14.5	13.3	14.3

Table 33. **Financial Characteristics of Housing Units: 1990**—Con.

[Based on sample and subject to sampling variability, see text. For definitions of terms and meanings of symbols, see text]

Census Tract or Block Numbering Area	Jefferson Parish—Con.			Orleans Parish		St. Bernard Parish		St. Charles Parish	St. John the Baptist Parish	
	Terrytown CDP	Timberlane CDP	Westwego city	Total	New Orleans city	Total	Chalmette CDP		Total	Laplace CDP
Specified owner-occupied housing units	4 218	2 581	2 019	69 533	69 533	14 875	7 079	9 319	8 398	5 381
SELECTED MONTHLY OWNER COSTS										
With a mortgage	3 614	2 297	821	42 640	42 640	9 480	4 516	6 003	5 426	4 247
Less than $300	365	47	86	2 568	2 568	961	463	243	322	208
$300 to $399	502	275	147	3 929	3 929	1 586	762	572	292	157
$400 to $499	496	368	182	4 704	4 704	1 244	675	629	680	466
$500 to $599	451	300	95	5 320	5 320	1 445	687	694	699	462
$600 to $799	889	605	228	10 217	10 217	2 519	1 064	1 553	1 986	1 638
$800 to $999	668	336	65	7 031	7 031	1 169	549	1 189	934	855
$1 000 to $1,499	235	272	8	5 763	5 763	443	253	858	436	401
$1 500 to $1,999	8	27	10	1 650	1 650	84	59	132	51	41
$2 000 or more	–	67	–	1 458	1 458	29	4	133	26	19
Median (dollars)	599	646	496	692	692	562	548	715	672	704
Not mortgaged	604	284	1 198	26 893	26 893	5 395	2 563	3 316	2 972	1 134
Less than $100	14	32	135	1 929	1 929	394	170	382	350	114
$100 to $199	348	94	638	11 434	11 434	2 868	1 394	1 943	1 542	581
$200 to $299	183	54	323	8 119	8 119	1 749	825	825	820	339
$300 to $399	51	58	96	2 785	2 785	273	128	106	163	52
$400 to $499	8	13	6	1 187	1 187	75	42	8	52	18
$500 or more	–	33	–	1 439	1 439	36	4	52	45	30
Median (dollars)	188	217	173	201	201	184	184	168	175	181
HOUSEHOLD INCOME IN 1989 BY SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989										
Less than $20,000	641	323	934	23 780	23 780	4 564	2 003	2 334	2 316	954
Less than 20 percent	80	33	403	5 829	5 829	1 593	711	893	792	238
20 to 24 percent	101	47	146	2 230	2 230	516	272	152	299	123
25 to 29 percent	76	40	49	1 788	1 788	367	156	170	147	41
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	34.1	35.9	21.4	34.9	34.9	–	–	24.0	25.2	24.1
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
$20 000 to $34,999	949	728	357	15 975	15 975	4 634	1 886	1 860	1 972	1 281
Less than 20 percent	378	296	363	8 074	8 074	2 364	1 147	987	847	453
20 to 24 percent	133	91	80	1 846	1 846	544	221	261	217	136
25 to 29 percent	163	121	59	1 794	1 794	446	224	246	449	329
30 to 34 percent	149	112	38	1 470	1 470	301	93	157	218	174
35 percent or more	126	108	17	2 786	2 786	379	201	209	241	189
Not computed	–	–	–	25	25	–	–	–	–	–
Median	23.6	23.7	16.0	19.8	19.8	17.4	17.1	18.6	23.2	25.8
$35 000 to $49,999	1 095	464	336	11 150	11 150	3 374	1 585	2 291	1 917	1 419
Less than 20 percent	698	264	284	6 609	6 609	2 430	1 218	1 353	1 201	777
20 to 24 percent	237	113	14	2 323	2 323	545	223	502	450	393
25 to 29 percent	137	63	22	1 185	1 185	289	77	190	198	184
30 to 34 percent	23	9	16	540	540	42	31	105	53	53
35 percent or more	–	15	–	483	483	68	36	141	15	12
Not computed	–	–	–	10	10	–	–	–	–	–
Median	16.3	18.3	10.0–	17.4	17.4	14.6	13.7	17.5	17.8	19.2
$50,000 or more	1 533	1 066	192	18 608	18 608	2 903	1 605	2 834	2 193	1 727
Less than 20 percent	1 323	924	192	14 673	14 673	2 650	1 505	2 248	1 856	1 403
20 to 24 percent	188	60	–	2 287	2 287	162	51	376	272	264
25 to 29 percent	22	38	–	845	845	55	30	132	46	41
30 to 34 percent	–	31	–	419	419	19	9	53	12	12
35 percent or more	–	13	–	368	368	12	5	25	7	7
Not computed	–	–	–	16	16	5	5	–	–	–
Median	11.7	13.4	10.0–	13.1	13.1	10.9	10.7	14.6	14.0	15.2
Specified renter-occupied housing units	4 072	1 454	1 820	104 870	104 870	5 558	3 485	3 006	2 571	1 608
GROSS RENT										
Less than $100	11	–	81	7 331	7 331	31	–	53	143	54
$100 to $199	16	–	194	8 633	8 633	119	44	166	287	161
$200 to $299	351	15	408	15 318	15 318	784	385	290	324	172
$300 to $399	1 177	289	765	24 829	24 829	1 614	1 030	815	564	377
$400 to $499	1 329	467	172	22 211	22 211	1 417	960	615	446	311
$500 to $599	577	400	87	11 286	11 286	858	603	434	294	237
$600 to $749	348	133	24	7 149	7 149	405	292	152	162	130
$750 to $999	122	84	–	3 581	3 581	42	29	67	90	86
$1 000 or more	21	7	–	1 404	1 404	19	19	60	9	9
No cash rent	120	59	89	3 128	3 128	269	123	354	252	71
Median (dollars)	429	485	312	378	378	406	419	400	365	401
HOUSEHOLD INCOME IN 1989 BY GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989										
Less than $10,000	886	172	674	45 168	45 168	1 515	837	895	898	496
Less than 20 percent	–	–	31	2 305	2 305	11	–	–	12	–
20 to 24 percent	11	–	7	1 732	1 732	23	–	34	45	38
25 to 29 percent	4	–	63	2 610	2 610	–	–	22	61	27
30 to 34 percent	–	4	63	1 743	1 743	44	26	28	37	20
35 percent or more	752	122	494	30 928	30 928	1 252	719	543	536	319
Not computed	119	46	16	5 850	5 850	185	92	268	207	92
Median	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+	50.0+
$10 000 to $19,999	1 306	332	579	25 388	25 388	1 639	987	649	502	288
Less than 20 percent	57	–	124	2 459	2 459	94	34	40	60	24
20 to 24 percent	157	63	103	2 931	2 931	215	108	125	75	44
25 to 29 percent	221	37	168	4 314	4 314	277	179	99	88	74
30 to 34 percent	284	54	43	4 167	4 167	276	147	131	127	74
35 percent or more	554	156	110	10 754	10 754	711	502	147	119	72
Not computed	33	22	31	763	763	66	17	107	33	–
Median	33.5	35.1	26.4	33.1	33.1	33.6	35.5	30.3	30.5	30.1
$20 000 to $34,999	1 249	556	434	20 585	20 585	1 711	1 128	696	690	464
Less than 20 percent	503	195	266	9 302	9 302	699	440	292	334	222
20 to 24 percent	425	156	75	5 037	5 037	558	368	200	113	89
25 to 29 percent	189	136	33	3 045	3 045	222	166	132	74	53
30 to 34 percent	68	54	8	1 340	1 340	111	90	23	67	54
35 percent or more	57	15	–	1 278	1 278	80	42	21	21	16
Not computed	7	–	52	583	583	41	22	28	81	30
Median	21.4	22.7	17.7	20.7	20.7	21.2	21.5	21.0	19.2	19.8
$35 000 or more	631	394	133	13 729	13 729	693	533	766	481	360
Less than 20 percent	522	343	124	11 558	11 558	577	449	653	382	293
20 to 24 percent	83	16	9	1 391	1 391	64	47	40	50	45
25 to 29 percent	–	26	–	265	265	8	–	43	24	17
30 to 34 percent	9	–	–	118	118	–	–	5	–	–
35 percent or more	–	–	–	82	82	11	11	4	–	–
Not computed	17	9	–	315	315	33	26	21	25	5
Median	14.5	13.4	10.0–	13.9	13.9	13.5	13.4	13.5	14.2	14.6

APPENDIX M

CENSUS INFORMATION FOR ST. CHARLES PARISH

PARISH OF ST. CHARLES

ECONOMIC DEVELOPMENT DEPARTMENT

P.O. Box 302 • Hahnville, Louisiana 70057
(504) 783-5140 • (504) 466-1990 • FAX (504) 783-6447

CHRIS A. TREGRE
PARISH PRESIDENT

Date Sent: 5.31.95

Time Sent: 11:01

To: Barbara Bossier

Location: Hartman Engineering

FAX Number: 466-0166

From: Mary Griffin

Location: St. Charles Parish Department of Economic Development

FAX Number: (504)783-6447

21 Pages to Follow

If you need a resend of any page, please call (504)783-5140. If you do not call within 15 minutes, I will assume that you have received the pages satisfactorily.

Thank You

1980 CENSUS SPECIAL POPULATION SUMMARY PREPARED IN ACCORDANCE WITH PUBLIC LAW 94-171

AREA NAME	TOTAL POPULATION	RACE - WHITE	%WHITE	BLACK	%BLACK	INDIAN, ESK&ALEUT	ASIAN, PACIFIC	OTHER	SPANISH ORIGIN	%SPANISH ORIGIN
St. Charles parish	37259	27437	73.639	9479	25.441	68	73	202	823	2.209
TRACT 0601	655	403	61.527	252	38.473	0	0	0	1	0.153
ED 0906	0	0	0.000	0	0.000	0	0	0	0	0.000
ED 0911	21	21	100.000	0	0.000	0	0	0	0	0.000
ED 0912	634	382	60.252	252	39.748	0	0	0	1	0.158
TRACT 0602	4374	3398	77.666	958	21.902	0	9	9	42	0.960
BLOCK GROUP 1	253	250	98.814	3	1.186	0	0	0	0	0.000
BLOCK 101	18	18	100.000	0	0.000	0	0	0	0	0.000
BLOCK 102	43	43	100.000	0	0.000	0	0	0	0	0.000
BLOCK 103	8	8	100.000	0	0.000	0	0	0	0	0.000
BLOCK 104	0	0	0.000	0	0.000	0	0	0	0	0.000
BLOCK 105	44	41	93.182	3	6.818	0	0	0	0	0.000
BLOCK 106	49	49	100.000	0	0.000	0	0	0	0	0.000
BLOCK 107	32	32	100.000	0	0.000	0	0	0	0	0.000
BLOCK 108	33	33	100.000	0	0.000	0	0	0	0	0.000
BLOCK 109	26	26	100.000	0	0.000	0	0	0	0	0.000
BLOCK GROUP 2	1993	1968	98.749	2	0.100	0	2	1	12	0.602
BLOCK 201	7	7	100.000	0	0.000	0	0	0	0	0.000
BLOCK 202	143	143	100.000	0	0.000	0	0	0	0	0.000
BLOCK 203	76	76	100.000	0	0.000	0	0	0	0	0.000
BLOCK 204	49	49	100.000	0	0.000	0	0	0	0	0.000
BLOCK 205	50	49	98.000	0	0.000	0	1	0	0	0.000
BLOCK 206	34	34	100.000	0	0.000	0	0	0	0	0.000
BLOCK 207	12	12	100.000	0	0.000	0	0	0	0	0.000
BLOCK 208	56	56	100.000	0	0.000	0	0	0	0	0.000
BLOCK 209	40	40	100.000	0	0.000	0	0	0	0	0.000
BLOCK 210	0	0	0.000	0	0.000	0	0	0	0	0.000
BLOCK 211	10	10	100.000	0	0.000	0	0	0	0	0.000
BLOCK 212	20	20	100.000	0	0.000	0	0	0	0	0.000
BLOCK 213	94	94	100.000	0	0.000	0	0	0	0	0.000
BLOCK 214	73	73	100.000	0	0.000	0	0	0	0	0.000
BLOCK 215	71	71	100.000	0	0.000	0	0	0	0	0.000
BLOCK 216	53	53	100.000	0	0.000	0	0	0	0	0.000
BLOCK 217	44	44	100.000	0	0.000	0	0	0	0	0.000
BLOCK 218	59	59	100.000	0	0.000	0	0	0	1	1.695
BLOCK 219	61	61	100.000	0	0.000	0	0	0	0	0.000
BLOCK 220	45	45	100.000	0	0.000	0	0	0	0	0.000
BLOCK 221	27	27	100.000	0	0.000	0	0	0	1	3.704
BLOCK 222	78	78	100.000	0	0.000	0	0	0	0	0.000
BLOCK 223	37	37	100.000	0	0.000	0	0	0	0	0.000
BLOCK 224	56	56	100.000	0	0.000	0	0	0	0	0.000
BLOCK 225	56	56	100.000	0	0.000	0	0	0	0	0.000
BLOCK 226	44	43	97.727	0	0.000	0	0	1	0	0.000

SENT BY: 5-31-95 ;10:56AM ; SCP ECON DEV DEPT.- 5044666166;# 2/22

Table 1. Selected Population and Housing Characteristics: 1990
St. Charles Parish, Louisiana

The population counts set forth herein are subject to possible correction for undercount or overcount. The United States Department of Commerce is considering whether to correct these counts and will publish corrected counts, if any, not later than July 1, 1991.

Total population	**42,437**
SEX	
Male	20,742
Female	21,695
AGE	
Under 5 years	3,896
5 to 17 years	9,483
18 to 20 years	1,544
21 to 24 years	2,238
25 to 44 years	14,809
45 to 54 years	4,045
55 to 59 years	1,710
60 to 64 years	1,578
65 to 74 years	1,957
75 to 84 years	895
85 years and over	282
Median age	30.3
Under 18 years	13,379
Percent of total population	31.5
65 years and over	3,134
Percent of total population	7.4
HOUSEHOLDS BY TYPE	
Total households	14,333
Family households (families)	11,422
Married-couple families	9,138
Percent of total households	63.8
Other family, male householder	482
Other family, female householder	1,802
Nonfamily households	2,911
Percent of total households	20.3
Householder living alone	2,520
Householder 65 years and over	828
Persons living in households	42,086
Persons per household	2.94
GROUP QUARTERS	
Persons living in group quarters	351
Institutionalized persons	314
Other persons in group quarters	37
RACE AND HISPANIC ORIGIN	
White	31,638
Black	10,253
Percent of total population	24.2
American Indian, Eskimo, or Aleut	113
Percent of total population	0.3
Asian or Pacific Islander	177
Percent of total population	0.4
Other race	256
Hispanic origin (of any race)	1,070
Percent of total population	2.5

Total housing units	**16,016**
OCCUPANCY AND TENURE	
Occupied housing units	14,333
Owner occupied	11,302
Percent owner occupied	78.9
Renter occupied	3,031
Vacant housing units	1,683
For seasonal, recreational, or occasional use	161
Homeowner vacancy rate (percent)	2.5
Rental vacancy rate (percent)	16.3
Persons per owner-occupied unit	3.00
Persons per renter-occupied unit	2.72
Units with over 1 person per room	683
UNITS IN STRUCTURE	
1-unit, detached	11,413
1-unit, attached	439
2 to 4 units	1,100
5 to 9 units	596
10 or more units	280
Mobile home, trailer, other	2,188
VALUE	
Specified owner-occupied units	9,124
Less than $50,000	2,180
$50,000 to $99,999	5,246
$100,000 to $149,999	1,090
$150,000 to $199,999	382
$200,000 to $299,999	178
$300,000 or more	48
Median (dollars)	68,000
CONTRACT RENT	
Specified renter-occupied units paying cash rent	2,656
Less than $250	863
$250 to $499	1,610
$500 to $749	137
$750 to $999	35
$1,000 or more	11
Median (dollars)	294
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER	
Occupied housing units	14,333
White	10,997
Black	3,176
Percent of occupied units	22.2
American Indian, Eskimo, or Aleut	32
Percent of occupied units	0.2
Asian or Pacific Islander	47
Percent of occupied units	0.3
Other race	81
Hispanic origin (of any race)	316
Percent of occupied units	2.2

The user should note that there are limitations to many of these data. Please refer to the technical documentation provided with Summary Tape File 1A for a further explanation on the limitations of the data.

DATE OF RUN: 06/11/91
PROFILE 8

STATE OF LOUISIANA
DIVISION OF ADMINISTRATION - PLANNING AND BUDGET
1990 CENSUS OF POPULATION AND HOUSING - SUMMARY TAPE FILE 1
HOUSING UNIT STRUCTURAL CHARACTERISTICS

PARISH: ST. CHARLES PARISH DISTRICT: PLACE: TRACT/BNA: BLOCK GROU

H19/43. OWNER-OCCUPIED HOUSING UNITS AND VALUE BY UNITS IN STRUCTURE

	OWNER-OCCUPIED HOUSING UNITS	AGGREGATE VALUE	AVERAGE VALUE
*** TOTAL ***	11,302	797,986,500	70,606
SINGLE FAMILY:			
1, DETACHED	9,469	754,936,500	79,670
1, ATTACHED	234	742,904,500	79,748
MULTI FAMILY:		12,032,000	51,200
2	110	5,979,500	54,359
3 OR MORE	25	1,914,500	68,500
MOBILE HOME OR TRAILER	85	4,765,000	56,412
OTHER	1,462	32,620,000	22,312
	61	4,450,500	72,959

H39. VACANT HOUSING UNITS

SPECIFIED VACANT FOR R
SPECIFIED VACANT FOR S
ALL OTHER VACANTS

H38. VACANT-FOR-RENT HOUS

AGGREGATE RENT ASKED
AVERAGE RENT ASKED

H31. VACANT-FOR-SALE HOUS

AGGREGATE PRICE ASKED
AVERAGE PRICE ASKED

H1/42/43. HOUSING UNITS IN STRUCTURE

	TOTAL HOUSING UNITS	PCT	VACANT HOUSING UNITS	PCT	TOTAL-OCCUPIED HOUSING UNITS	PCT	OWNER-OCCUPIED HOUSING UNITS	PCT
*** TOTAL ***	16,016	100.0%	1,683	100.0%	14,333	100.0%	11,302	100.0%
SINGLE FAMILY:	11,892	74.8	908	54.9	10,944	76.4	9,469	83.6
1, DETACHED	11,413	71.3	843	50.1	10,570	73.7	9,434	83.5
1, ATTACHED	439	2.7	65	3.9	374	2.6	235	2.1
MULTI FAMILY:	1,976	12.3	477	28.3	1,499	10.5	119	1.0
2	336	2.1	63	3.7	273	1.9	25	.2
3 OR 4	764	4.8	175	10.4	589	4.1	54	.5
5 TO 9	596	3.7	161	9.6	435	3.0	22	.2
10 TO 19	121	.8	29	1.7	92	.6	8	.1
20 TO 49	159	1.0	49	2.9	110	.8	1	
50 OR MORE								
MOBILE HOME OR TRAILER	2,079	12.9	273	16.2	1,797	12.5	1,462	12.9
OTHER	118	.7	25	1.5	93	.6	61	.5

H43/44. AGGREGATE AND AVERAGE NUMBER OF PERSONS BY OCCUPIED HOUSING UNITS IN STRUCTURE

	OCCUPIED HOUSING UNITS AGGR. PERSONS	OCCUPIED HOUSING UNITS AVG. PERSONS	OWNER OCCUPIED HOUSING UNITS AGGR. PERSONS	OWNER OCCUPIED HOUSING UNITS AVG. PERSONS	RENTER OCCUPIE AGGR. PERSONS
*** TOTAL ***	42,686	2.94	33,852	3.00	8,834
SINGLE FAMILY:	32,988	3.01	29,194	3.02	3,794
1, DETACHED	31,957	3.02	28,572	3.03	3,385
1, ATTACHED	1,031	2.76	622	2.65	409
MULTI FAMILY:	3,507	2.59	228	2.00	3,267
2	751	2.75	54	2.16	697
3 OR 4	1,519	2.58	103	1.94	1,416
5 TO 9	937	2.15	50	2.27	887
10 TO 19	186	2.04	16	1.25	170
20 TO 49	192	1.00	1	1.00	191
50 OR MORE					
MOBILE HOME OR TRAILER	5,209	2.90	4,228	2.89	981
OTHER	302	3.25	210	3.44	92

F:

BY VACANCY STATUS

ENT	507
ALE ONLY	259
	857

IMB UNITS BY RENT ASKED

	176,802
	301

IMB UNITS BY PRICE ASKED

	19,673,900
	62,305

RENTER-OCCUPIED HOUSING UNITS	PCT
3,031	100.0%
1,275	42.1
1,156	37.5
139	4.6
1,389	45.8
248	8.2
535	17.7
413	13.6
84	2.8
109	3.6
335	11.1
32	1.1

D HOUSING UNITS AVG. PERSONS
2.72
2.90
2.90
2.94
2.42
2.01
2.69
2.15
2.12
1.75
2.93
2.80

1990 Census of Population and Housing
040 Louisiana
160 Destrehan CDP

URBAN AND RURAL RESIDENCE	
Total population	8,031
Urban population	8,031
Percent of total population	100.0
Rural population	0
Percent of total population	0.0
Farm population	0
SCHOOL ENROLLMENT	
Persons 3 years and over enrolled in school	2,366
Preprimary school	314
Elementary or high school	1,604
Percent in private school	31.2
College	448
EDUCATIONAL ATTAINMENT	
Persons 25 years and over	4,981
Less than 9th grade	138
9th to 12th grade, no diploma	390
High school graduate	1,458
Some college, no degree	1,123
Associates degree	261
Bachelor's degree	1,208
Graduate or professional degree	403
Percent high school graduate or higher	89.4
Percent bachelor's degree or higher	32.3
RESIDENCE IN 1985	
Persons 5 years and over	7,210
Lived in same house	3,168
Lived in different house in U.S.	3,901
Same State	2,954
Same county	818
Different county	2,136
Different State	947
Lived abroad	141
DISABILITY OF CIVILIAN NONINSTITUTIONALIZED PERSONS	
Persons 16 to 64 years	5,220
With a mobility or self-care limitation	95
With a mobility limitation	63
With a self-care limitation	49
With a work disability	180
In labor force	57
Prevented from working	105
Persons 65 years and over	234
With a mobility or self-care limitation	42
With a mobility limitation	27
With a self-care limitation	33

1990 Census of Population and Housing
040 Louisiana
160 Destrehan CDP

LABOR FORCE STATUS	
Persons 16 years and over	5,605
In labor force	4,128
Percent in labor force	73.6
Civilian labor force	4,116
Employed	3,992
Unemployed	124
Percent unemployed	3.0
Armed Forces	12
Not in labor force	1,477
Males 16 years and over	2,696
In labor force	2,358
Percent in labor force	87.5
Civilian labor force	2,346
Employed	2,313
Unemployed	33
Percent unemployed	1.4
Armed Forces	12
Not in labor force	338
Females 16 years and over	2,909
In labor force	1,770
Percent in labor force	60.8
Civilian labor force	1,770
Employed	1,679
Unemployed	9[illegible]
Percent unemployed	5.[illegible]
Armed Forces	0
Not in labor force	1,139
Females 16 years and over	2,909
With own children under 6 years	791
Percent in labor force	64.2
With own children 6 to 17 years only	586
Percent in labor force	68.8
Own children under 6 years in families and subfamilies	1,006
All parents present in household in labor force	613
Own children 6 to 17 years in families and subfamilies	1,562
All parents present in household in labor force	967
Persons 16 to 19 years	328
Not enrolled in school and not high school graduate	10
Employed or in Armed Forces	0
Unemployed	0
Not in labor force	10

1990 Census of Population and Housing
040 Louisiana
160 Destrehan CDP

CLASS OF WORKER	
Employed persons 16 years and over	3,992
Private wage and salary workers	3,397
Government workers	448
Local government workers	256
State government workers	52
Federal government workers	140
Self-employed workers	147
Unpaid family workers	0

1990 Census of Population and Housing
040 Louisiana
160 Destrehan CDP

Total housing units	2,901
YEAR STRUCTURE BUILT	
1989 to March 1990	88
1985 to 1988	878
1980 to 1984	1,061
1970 to 1979	480
1960 to 1969	174
1950 to 1959	169
1940 to 1949	24
1939 or earlier	27
BEDROOMS	
No bedroom	0
1 bedroom	77
2 bedrooms	560
3 bedrooms	1,295
4 bedrooms	839
5 or more bedrooms	130
SELECTED CHARACTERISTICS	
Lacking complete plumbing facilities	0
Lacking complete kitchen facilities	0
Condominium housing units	129
SOURCE OF WATER	
Public system or private company	2,895
Individual drilled well	0
Individual dug well	0
Some other source	6
SEWAGE DISPOSAL	
Public sewer	2,882
Septic tank or cesspool	19
Other means	0
Occupied housing units	2,635
HOUSE HEATING FUEL	
Utility gas	1,428
Bottled, tank, or LP gas	8
Electricity	1,199
Fuel oil, kerosene, etc	0
Coal or coke	0
Wood	0
Solar energy	0
Other fuel	0
No fuel used	0

1990 Census of Population and Housing
040 Louisiana
160 St. Rose CDP

URBAN AND RURAL RESIDENCE	
Total population	6,259
Urban population	6,259
Percent of total population	100.0
Rural population	0
Percent of total population	0.0
Farm population	0
SCHOOL ENROLLMENT	
Persons 3 years and over enrolled in school	1,700
Preprimary school	241 3.9%
Elementary or high school	1,243 19.9%
Percent in private school	21.6
College	216
EDUCATIONAL ATTAINMENT	
Persons 25 years and over	3,603
Less than 9th grade	367
9th to 12th grade, no diploma	599
High school graduate	1,238
Some college, no degree	804
Associates degree	204
Bachelor's degree	347
Graduate or professional degree	44
Percent high school graduate or higher	73.2
Percent bachelor's degree or higher	10.9
RESIDENCE IN 1985	
Persons 5 years and over	5,579
Lived in same house	3,443
Lived in different house in U.S.	2,116
Same State	1,932
Same county	691
Different county	1,241
Different State	184
Lived abroad	20
DISABILITY OF CIVILIAN NONINSTITUTIONALIZED PERSONS	
Persons 16 to 64 years	4,027
With a mobility or self-care limitation	208
With a mobility limitation	129
With a self-care limitation	163
With a work disability	367
In labor force	138
Prevented from working	229
Persons 65 years and over	318
With a mobility or self-care limitation	47
With a mobility limitation	35
With a self-care limitation	20

Table 1. Selected Population and Housing Characteristics: 1990
St. Charles Parish, Louisiana

The population counts set forth herein are subject to possible correction for undercount or overcount. The United States Department of Commerce is considering whether to correct these counts and will publish corrected counts, if any, not later than July 1, 1991.

Total population	42,437
SEX	
Male	20,742
Female	21,695
AGE	
Under 5 years	3,896
5 to 17 years	9,483
18 to 20 years	1,544
21 to 24 years	2,238
25 to 44 years	14,809
45 to 54 years	4,045
55 to 59 years	1,710
60 to 64 years	1,578
65 to 74 years	1,957
75 to 84 years	895
85 years and over	282
Median age	30.3
Under 18 years	13,379
Percent of total population	31.5
65 years and over	3,134
Percent of total population	7.4
HOUSEHOLDS BY TYPE	
Total households	14,333
Family households (families)	11,422
Married-couple families	9,138
Percent of total households	63.8
Other family, male householder	482
Other family, female householder	1,802
Nonfamily households	2,911
Percent of total households	20.3
Householder living alone	2,520
Householder 65 years and over	828
Persons living in households	42,086
Persons per household	2.94
GROUP QUARTERS	
Persons living in group quarters	351
Institutionalized persons	314
Other persons in group quarters	37
RACE AND HISPANIC ORIGIN	
White	31,638
Black	10,253
Percent of total population	24.2
American Indian, Eskimo, or Aleut	113
Percent of total population	0.3
Asian or Pacific Islander	177
Percent of total population	0.4
Other race	256
Hispanic origin (of any race)	1,070
Percent of total population	2.5

Total housing units	16,016
OCCUPANCY AND TENURE	
Occupied housing units	14,333
Owner occupied	11,302
Percent owner occupied	78.9
Renter occupied	3,031
Vacant housing units	1,683
For seasonal, recreational, or occasional use	161
Homeowner vacancy rate (percent)	2.5
Rental vacancy rate (percent)	16.3
Persons per owner-occupied unit	3.00
Persons per renter-occupied unit	2.72
Units with over 1 person per room	683
UNITS IN STRUCTURE	
1-unit, detached	11,413
1-unit, attached	439
2 to 4 units	1,100
5 to 9 units	596
10 or more units	280
Mobile home, trailer, other	2,188
VALUE	
Specified owner-occupied units	9,124
Less than $50,000	2,180
$50,000 to $99,999	5,246
$100,000 to $149,999	1,090
$150,000 to $199,999	382
$200,000 to $299,999	178
$300,000 or more	48
Median (dollars)	68,000
CONTRACT RENT	
Specified renter-occupied units paying cash rent	2,656
Less than $250	863
$250 to $499	1,610
$500 to $749	137
$750 to $999	35
$1,000 or more	11
Median (dollars)	294
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER	
Occupied housing units	14,333
White	10,997
Black	3,176
Percent of occupied units	22.2
American Indian, Eskimo, or Aleut	32
Percent of occupied units	0.2
Asian or Pacific Islander	47
Percent of occupied units	0.3
Other race	81
Hispanic origin (of any race)	316
Percent of occupied units	2.2

The user should note that there are limitations to many of these data. Please refer to the technical documentation provided with Summary Tape File 1A for a further explanation on the limitations of the data.

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040 Louisiana
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Total housing units	2,901
YEAR STRUCTURE BUILT	
1989 to March 1990	88
1985 to 1988	878
1980 to 1984	1,061
1970 to 1979	480
1960 to 1969	174
1950 to 1959	169
1940 to 1949	24
1939 or earlier	27
BEDROOMS	
No bedroom	0
1 bedroom	77
2 bedrooms	560
3 bedrooms	1,295
4 bedrooms	839
5 or more bedrooms	130
SELECTED CHARACTERISTICS	
Lacking complete plumbing facilities	0
Lacking complete kitchen facilities	0
Condominium housing units	129
SOURCE OF WATER	
Public system or private company	2,895
Individual drilled well	0
Individual dug well	0
Some other source	6
SEWAGE DISPOSAL	
Public sewer	2,882
Septic tank or cesspool	19
Other means	0
Occupied housing units	2,635
HOUSE HEATING FUEL	
Utility gas	1,428
Bottled, tank, or LP gas	8
Electricity	1,199
Fuel oil, kerosene, etc	0
Coal or coke	0
Wood	0
Solar energy	0
Other fuel	0
No fuel used	0

1990 Census of Population and Housing
040 Louisiana
160 St. Rose CDP

LABOR FORCE STATUS

Persons 16 years and over	4,351
In labor force	3,092
Percent in labor force	71.1
Civilian labor force	3,086
Employed	2,903
Unemployed	183
Percent unemployed	5.9
Armed Forces	6
Not in labor force	1,259
Males 16 years and over	2,088
In labor force	1,650
Percent in labor force	79.0
Civilian labor force	1,650
Employed	1,564
Unemployed	86
Percent unemployed	5.2
Armed Forces	0
Not in labor force	438
Females 16 years and over	2,263
In labor force	1,442
Percent in labor force	63.7
Civilian labor force	1,436
Employed	1,339
Unemployed	97
Percent unemployed	6.8
Armed Forces	6
Not in labor force	821
Females 16 years and over	2,263
With own children under 6 years	616
Percent in labor force	68.3
With own children 6 to 17 years only	474
Percent in labor force	75.3
Own children under 6 years in families and subfamilies	815
All parents present in household in labor force	514
Own children 6 to 17 years in families and subfamilies	1,252
All parents present in household in labor force	818
Persons 16 to 19 years	298
Not enrolled in school and not high school graduate	35
Employed or in Armed Forces	0
Unemployed	19
Not in labor force	16

1990 Census of Population and Housing
040 Louisiana
160 St. Rose CDP

INCOME IN 1989	
Households	2,163
Less than $5,000	158
$5,000 to $9,999	184
$10,000 to $14,999	222
$15,000 to $24,999	304
$25,000 to $34,999	531
$35,000 to $49,999	495
$50,000 to $74,999	220
$75,000 to $99,999	37
$100,000 to $149,999	12
$150,000 or more	0
Median household income (dollars)	28,242
Families	1,752
Less than $5,000	102
$5,000 to $9,999	111
$10,000 to $14,999	165
$15,000 to $24,999	259
$25,000 to $34,999	431
$35,000 to $49,999	437
$50,000 to $74,999	198
$75,000 to $99,999	37
$100,000 to $149,999	12
$150,000 or more	0
Median family income (dollars)	30,238
Nonfamily households	411
Less than $5,000	63
$5,000 to $9,999	73
$10,000 to $14,999	57
$15,000 to $24,999	63
$25,000 to $34,999	83
$35,000 to $49,999	50
$50,000 to $74,999	22
$75,000 to $99,999	0
$100,000 to $149,999	0
$150,000 or more	0
Median nonfamily household income (dollars)	17,875
Per capita income (dollars)	10,228

1990 Census of Population and Housing
040 Louisiana
160 St. Rose CDP

Total housing units	2,384
YEAR STRUCTURE BUILT	
1989 to March 1990	35
1985 to 1988	314
1980 to 1984	899
1970 to 1979	562
1960 to 1969	331
1950 to 1959	86
1940 to 1949	81
1939 or earlier	76
BEDROOMS	
No bedroom	12
1 bedroom	246
2 bedrooms	561
3 bedrooms	1,346
4 bedrooms	205
5 or more bedrooms	14
SELECTED CHARACTERISTICS	
Lacking complete plumbing facilities	66
Lacking complete kitchen facilities	42
Condominium housing units	112
SOURCE OF WATER	
Public system or private company	2,367
Individual drilled well	0
Individual dug well	0
Some other source	17
SEWAGE DISPOSAL	
Public sewer	2,109
Septic tank or cesspool	217
Other means	58
Occupied housing units	2,159
HOUSE HEATING FUEL	
Utility gas	809
Bottled, tank, or LP gas	41
Electricity	1,292
Fuel oil, kerosene, etc	0
Coal or coke	0
Wood	8
Solar energy	0
Other fuel	0
No fuel used	9

1990 Census of Population and Housing
040 Louisiana
160 St. Rose CDP

INCOME IN 1989	
Households	2,163
Less than $5,000	158
$5,000 to $9,999	184
$10,000 to $14,999	222
$15,000 to $24,999	304
$25,000 to $34,999	531
$35,000 to $49,999	495
$50,000 to $74,999	220
$75,000 to $99,999	37
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$50,000 to $74,999	198
$75,000 to $99,999	37
$100,000 to $149,999	12
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Median family income (dollars)	30,238
Nonfamily households	411
Less than $5,000	63
$5,000 to $9,999	73
$10,000 to $14,999	57
$15,000 to $24,999	63
$25,000 to $34,999	83
$35,000 to $49,999	50
$50,000 to $74,999	22
$75,000 to $99,999	0
$100,000 to $149,999	0
$150,000 or more	0
Median nonfamily household income (dollars)	17,875
Per capita income (dollars)	10,228

1990 Census of Population and Housing
040 Louisiana
160 St. Rose CDP

Total housing units	2,384
YEAR STRUCTURE BUILT	
1989 to March 1990	35
1985 to 1988	314
1980 to 1984	699
1970 to 1979	562
1960 to 1969	331
1950 to 1959	86
1940 to 1949	81
1939 or earlier	76
BEDROOMS	
No bedroom	12
1 bedroom	246
2 bedrooms	561
3 bedrooms	1,346
4 bedrooms	205
5 or more bedrooms	14
SELECTED CHARACTERISTICS	
Lacking complete plumbing facilities	66
Lacking complete kitchen facilities	42
Condominium housing units	112
SOURCE OF WATER	
Public system or private company	2,367
Individual drilled well	0
Individual dug well	0
Some other source	17
SEWAGE DISPOSAL	
Public sewer	2,109
Septic tank or cesspool	217
Other means	58
Occupied housing units	2,159
HOUSE HEATING FUEL	
Utility gas	809
Bottled, tank, or LP gas	41
Electricity	1,292
Fuel oil, kerosene, etc	0
Coal or coke	0
Wood	8
Solar energy	0
Other fuel	0
No fuel used	9

APPENDIX N

CENSUS INFORMATION FOR PLAQUEMINES PARISH

1990 Census of Population and Housing
040 Louisiana
160 Destrehan CDP

Marco site
St. Charles Parish

URBAN AND RURAL RESIDENCE	
Total population	8,031
Urban population	8,031
Percent of total population	100.0
Rural population	0
Percent of total population	0.0
Farm population	0
SCHOOL ENROLLMENT	
Persons 3 years and over enrolled in school	2,366
Preprimary school	314
Elementary or high school	1,604
Percent in private school	31.2
College	448
EDUCATIONAL ATTAINMENT	
Persons 25 years and over	4,981
Less than 9th grade	138
9th to 12th grade, no diploma	390
High school graduate	1,458
Some college, no degree	1,123
Associates degree	261
Bachelor's degree	1,208
Graduate or professional degree	403
Percent high school graduate or higher	89.4
Percent bachelor's degree or higher	32.3
RESIDENCE IN 1985	
Persons 5 years and over	7,210
Lived in same house	3,168
Lived in different house in U.S.	3,901
Same State	2,954
Same county	818
Different county	2,136
Different State	947
Lived abroad	141
DISABILITY OF CIVILIAN NONINSTITUTIONALIZED PERSONS	
Persons 16 to 64 years	5,220
With a mobility or self-care limitation	95
With a mobility limitation	63
With a self-care limitation	49
With a work disability	180
In labor force	57
Prevented from working	105
Persons 65 years and over	234
With a mobility or self-care limitation	42
With a mobility limitation	27
With a self-care limitation	33

1990 Census of Population and Housing
040 Louisiana
160 Destrehan CDP

LABOR FORCE STATUS

Persons 16 years and over	5,605
In labor force	4,128
Percent in labor force	73.6
Civilian labor force	4,116
Employed	3,992
Unemployed	124
Percent unemployed	3.0
Armed Forces	12
Not in labor force	1,477
Males 16 years and over	2,696
In labor force	2,358
Percent in labor force	87.5
Civilian labor force	2,346
Employed	2,313
Unemployed	33
Percent unemployed	1.4
Armed Forces	12
Not in labor force	338
Females 16 years and over	2,909
In labor force	1,770
Percent in labor force	60.8
Civilian labor force	1,770
Employed	1,679
Unemployed	91
Percent unemployed	5.1
Armed Forces	0
Not in labor force	1,139
Females 16 years and over	2,909
With own children under 6 years	791
Percent in labor force	64.2
With own children 6 to 17 years only	586
Percent in labor force	68.8
Own children under 6 years in families and subfamilies	1,006
All parents present in household in labor force	613
Own children 6 to 17 years in families and subfamilies	1,562
All parents present in household in labor force	967
Persons 16 to 19 years	328
Not enrolled in school and not high school graduate	10
Employed or in Armed Forces	0
Unemployed	0
Not in labor force	10

FAX COVER SHEET

REGIONAL PLANNING COMMISSION

JEFFERSON, ORLEANS, ST. BERNARD AND ST. TAMMANY PARISHES

333 St. Charles Avenue • Suite 1100
New Orleans • Louisiana • 70130-3120

FAX: 504/568-6643 - TELEPHONE: 504/568-6611

Date Sent June 5, 1995

Number of pages sent (including Fax Cover Sheet) 23

TO Kerry Higgins

FAX NUMBER 4616-61616

Company/Agency, etc.

FROM Jonathon Ducote

Sender's FAX number 568-6643

Sender's telephone number 568-6611

COMMENTS

1990 Census of Population and Housing
040 Louisiana
050 Plaquemines Parish

	Page
Total population	25,575
SEX	
Male	12,951
Female	12,624
AGE	
Under 5 years	2,152
5 to 17 years	5,864
18 to 20 years	1,143
21 to 24 years	1,601
25 to 44 years	8,179
45 to 54 years	2,481
55 to 59 years	1,112
60 to 64 years	1,011
65 to 74 years	1,304
75 to 84 years	595
85 years and over	133
Median age	29.4
Under 18 years	8,016
Percent of total population	31.3
65 years and over	2,032
Percent of total population	7.9
HOUSEHOLDS BY TYPE	
Total households	8,213
Family households (families)	6,574
Married-couple families	5,137
Percent of total households	62.5
Other family, male householder	418
Other family, female householder	1,019
Nonfamily households	1,639
Percent of total households	20.0
Householder living alone	1,408
Householder 65 years and over	520
Persons living in households	24,995
Persons per household	3.04
GROUP QUARTERS	
Persons living in group quarters	580
Institutionalized persons	431
Other persons in group quarters	149
RACE AND HISPANIC ORIGIN	
White	18,522
Black	5,944
Percent of total population	23.2
American Indian, Eskimo, or Aleut	475
Percent of total population	1.9
Asian or Pacific Islander	518
Percent of total population	2.0
Other race	116
Hispanic origin (of any race)	590
Percent of total population	2.3

1990 Census of Population and Housing
040 Louisiana
050 Plaquemines Parish

	Page
Total housing units	9,432
OCCUPANCY AND TENURE	
Occupied housing units	8,213
Owner occupied	6,236
Percent owner occupied	75.9
Renter occupied	1,977
Vacant housing units	1,219
For seasonal, recreational, or occasional use	311
Homeowner vacancy rate (percent)	1.6
Rental vacancy rate (percent)	12.1
Persons per owner-occupied unit	3.04
Persons per renter-occupied unit	3.05
Units with over 1 person per room	771
UNITS IN STRUCTURE	
1-unit, detached	4,980
1-unit, attached	170
2 to 4 units	732
5 to 9 units	108
10 or more units	76
Mobile home, trailer, other	3,366
VALUE	
Specified owner-occupied units	3,234
Less than $50,000	1,166
$50,000 to $99,000	1,485
$100,000 to $149,000	402
$150,000 to $199,999	101
$200,000 to $299,999	60
$300,000 or more	20
Median (dollars)	62,200
CONTRACT RENT	
Specified renter-occupied units paying cash rent	1,616
Less than $250	542
$250 to $499	973
$500 to $749	91
$750 to $999	8
$1,000 or more	2
Median (dollars)	298
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER	
Occupied housing units	8,213
White	6,309
Black	1,604
Percent of occupied units	19.5
American Indian, Eskimo, or Aleut	143
Percent of occupied units	1.7
Asian or Pacific Islander	123
Percent of occupied units	1.5
Other race	34
Hispanic origin (of any race)	176
Percent of occupied units	2.1

1990 Census of Population and Housing
040 Louisiana
160 Belle Chasse CDP

	Page
Total population	8,512
SEX	
Male	4,341
Female	4,171
AGE	
Under 5 years	684
5 to 17 years	1,825
18 to 20 years	380
21 to 24 years	591
25 to 44 years	2,955
45 to 54 years	822
55 to 59 years	376
60 to 64 years	351
65 to 74 years	386
75 to 84 years	120
85 years and over	22
Median age	29.6
Under 18 years	2,509
Percent of total population	29.5
65 years and over	528
Percent of total population	6.2
HOUSEHOLDS BY TYPE	
Total households	2,724
Family households (families)	2,227
Married-couple families	1,854
Percent of total households	68.1
Other family, male householder	107
Other family, female householder	266
Nonfamily households	497
Percent of total households	18.2
Householder living alone	426
Householder 65 years and over	124
Persons living in households	8,025
Persons per household	2.95
GROUP QUARTERS	
Persons living in group quarters	487
Institutionalized persons	341
Other persons in group quarters	146
RACE AND HISPANIC ORIGIN	
White	7,876
Black	497
Percent of total population	5.8
American Indian, Eskimo, or Aleut	31
Percent of total population	0.4
Asian or Pacific Islander	67
Percent of total population	0.8
Other race	41
Hispanic origin (of any race)	281
Percent of total population	3.3

1990 Census of Population and Housing
040 Louisiana
160 Belle Chasse CDP

	Page
Total housing units	2,900
OCCUPANCY AND TENURE	
Occupied housing units	2,724
Owner occupied	1,698
Percent owner occupied	62.3
Renter occupied	1,026
Vacant housing units	176
For seasonal, recreational, or occasional use	14
Homeowner vacancy rate (percent)	0.9
Rental vacancy rate (percent)	7.3
Persons per owner-occupied unit	2.88
Persons per renter-occupied unit	3.05
Units with over 1 person per room	122
UNITS IN STRUCTURE	
1-unit, detached	1,698
1-unit, attached	106
2 to 4 units	621
5 to 9 units	85
10 or more units	47
Mobile home, trailer, other	343
VALUE	
Specified owner-occupied units	1,300
Less than $50,000	130
$50,000 to $99,000	795
$100,000 to $149,000	274
$150,000 to $199,999	60
$200,000 to $299,999	30
$300,000 or more	11
Median (dollars)	83,200
CONTRACT RENT	
Specified renter-occupied units paying cash rent	893
Less than $250	144
$250 to $499	560
$500 to $749	81
$750 to $999	8
$1,000 or more	0
Median (dollars)	351
RACE AND HISPANIC ORIGIN OF HOUSEHOLDER	
Occupied housing units	2,724
White	2,604
Black	89
Percent of occupied units	3.3
American Indian, Eskimo, or Aleut	10
Percent of occupied units	0.4
Asian or Pacific Islander	11
Percent of occupied units	0.4
Other race	10
Hispanic origin (of any race)	85
Percent of occupied units	3.1

1990 Census of Population and Housing
040 Louisiana
050 Plaquemines Parish
140 Tract 501

	Page
Total population	2,347
SEX	
Male	1,184
Female	1,163
AGE	
Under 5 years	168
5 to 17 years	502
18 to 20 years	96
21 to 24 years	160
25 to 44 years	690
45 to 54 years	226
55 to 59 years	110
60 to 64 years	120
65 to 74 years	159
75 to 84 years	90
85 years and over	26
Median age	31.3
Under 18 years	670
Percent of total population	28.5
65 years and over	275
Percent of total population	11.7
HOUSEHOLDS BY TYPE	
Total households	743
Family households (families)	577
Married-couple families	417
Percent of total households	56.1
Other family, male householder	42
Other family, female householder	118
Nonfamily households	166
Percent of total households	22.3
Householder living alone	156
Householder 65 years and over	79
Persons living in households	2,258
Persons per household	3.04
GROUP QUARTERS	
Persons living in group quarters	89
Institutionalized persons	89
Other persons in group quarters	0
RACE AND HISPANIC ORIGIN	
White	884
Black	1,435
Percent of total population	61.1
American Indian, Eskimo, or Aleut	17
Percent of total population	0.7
Asian or Pacific Islander	5
Percent of total population	0.2
Other race	6
Hispanic origin (of any race)	42
Percent of total population	1.8

APPENDIX O

STORMWATER DATA FROM JEFFERSON PARISH

NPDES STORM WATER PERMIT

PART 2 PERMIT APPLICATION

Prepared For

THE PARISH OF JEFFERSON, LOUISIANA

May 1993

Prepared by

Montgomery Watson, Inc.
3501 North Causeway, Suite 300
Metairie, Louisiana 70002

RESULTS OF WET WE
KENNER RE

Parameter	Units	No. of Data Points	Date 2/26/93	3/2/93	3/12/93	3/25/93	4/8/93
Rainfall Amount	inches	6	0.44	1.67	0.98	0.52	1.39
Duration of Rain Event	minutes	6	268	212	248	28	795
Date of Previous Rain	date	5	NA	2/25/93	3/2/93	3/20/93	4/4/93
pH	--	3		7.2	7.7	7.5	
Temperature	°F	3		63.0	48.0	68	
Total Chlorine Residual	mg/l	2		0		0	
Oil and Grease	mg/l	4	7.33	10.0	4.2	1.6	NA
Fecal Coliform	colonies/100 ml	2		>6,000	1250		
Fecal Streptococcus	colonies/100 ml	2		>10,000	1900		
Fecal Coli/Strep	--	--		0.6	0.66		
Cyanide	mg/l	5	0.443	<0.020	0.360	0.360	
Phenol	mg/l	5	0.0045	<0.02	<0.002	0.0045	<0.002
Total Suspended Solids	mg/l	4	24.0		44.0	57	16
Total Dissolved Solids	mg/l	4	136.0		1360	105	1038
BOD (5)	mg/l	4	7.0		13.0	12	9
COD	mg/l	3	61.0	50.0	250.98		NA
TKN	mg/l	3	1.4	0.50	6.21		NA
NO(2) + NO(3)	mg/l	3	<0.01	2.2	<0.01		NA
Total Ammonia	mg/l	3	0.25	0.18	5.8		NA
Organic Nitrogen	mg/l	3	1.15	0.32	0.41		NA
Total Phosphorus	mg/l	3	0.312	0.19	0.264		NA
Dissolved Phosphorus	mg/l	2	--	0.08	0.079		NA
Metals							
Antimony	mg/l	1		<0.005		NA	NA
Arsenic	mg/l	1		<0.005		NA	NA
Beryllium	mg/l	1		<0.001		NA	NA
Cadmium	mg/l	1		<0.001		NA	NA
Chromium	mg/l	1		<0.001		NA	NA
Copper	mg/l	1		0.034		NA	NA
Lead	mg/l	1		0.003		NA	NA
Mercury	mg/l	1		<0.0002		NA	NA
Nickel	mg/l	1		0.006		NA	NA
Selenium	mg/l	1		<0.010		NA	NA
Silver	mg/l	1		<0.001		NA	NA
Thallium	mg/l	1		<0.005		NA	NA
Zinc	mg/l	1		0.03		NA	NA
Volatile Organics							
Chloroform	mg/l	4	0.00019	<0.01	<0.01	NA	0.0003
1.1.1-Trichloroethane	mg/l	4	0.00016	<0.01	<0.01	NA	<0.00015
Toluene	mg/l	4	0.00013	<0.01	<0.01	NA	<0.0001
Chlorobenzene	mg/l	4	<0.0001	<0.05	<0.05	NA	<0.0001
Ethyl Benzene	mg/l	4	<0.00005	<0.01	<0.01	NA	<0.00005
Bromodichloromethane	mg/l	4	<0.00015	<0.01	<0.01	NA	<0.00015
Chloromethane	mg/l	4	<0.0003	<0.05	<0.05	NA	<0.0003
Base Neutral and Acid Extractables							
Phenol	mg/l	1		<0.01			
Diethyl Phthalate	mg/l	1		<0.01			
Dibutyl Phthalate	mg/l	1		<0.01			
Bis (2-ethylhexyl) Phthalate	mg/l	1		<0.01			
Pesticides	mg/l						
PCBs	mg/l						

NA Analysis not available at time of report.
/p/ Proposed criterion.
* Insufficient data to develop criteria. Value presented is the L.O.E.L. (lowest observed effect level).
+ Hardness dependent criteria (value will increas if hardness is greater than 100 mg/l CaCO(3)).

TABLE 3-2

ESULTS OF WET WEATHER FIELD SCREENING
KENNER RESIDENTIAL (R1)

3/25/93	4/8/93	4/20/93	Average	NURP	Primary Drinking Water Standards (MCL)	EPA Fresh Water Acute	EPA Fresh Water Chronic	EPA Marine Water Acute	EPA Marine Water Chronic
0.52	1.39	0.33	0.89						
28	795	62	268.83						
3/20/93	4/4/93	4/14/93	NA						
7.5							6.5 - 9		6.5 - 8.5
68			60						
0			0			0.019	0.011	0.013	0.0075
1.6	NA	NA	5.78						
			2739						
			4359						
0.360		NA	0.24						
0.0045	<0.002	NA	<0.02						
57	16		35.3	180					
105	1038		660		500	None			
12	9		10.3	12					
	NA		120.7	82					
	NA		2.7	1.9					
	NA		0.74		10				
	NA		2.10						
	NA		0.63						
	NA		0.26	0.42					
	NA	NA	0.08	0.15					
NA	NA	NA	<0.005			/p/.088	/p/.030	/p/1.500	/p/.500
NA	NA	NA	<0.005		0.05	none			
NA	NA	NA	<0.001			*0.130	*0.0053		
NA	NA	NA	<0.001		0.005	0.0039+	0.0011+	0.043	0.0093
NA	NA	NA	<0.001		0.1	0.013	0.011	1.100	0.050
NA	NA	NA	0.034	0.043	1.0	0.018+	0.012+	0.0029	
NA	NA	NA	0.003	0.182	0.050	0.083+	0.0032+	0.220	0.0085
NA	NA	NA	<0.0002		0.002	0.0024	0.000012	0.0021	0.000025
NA	NA	NA	0.006		--	1.400+	0.160+	0.075	0.0083
NA	NA	NA	<0.010		0.05	0.020	0.005	0.300	0.071
NA	NA	NA	<0.001			0.0041+/p/.00092	0.00012	0.0023/p/.0072	/p/.00092
NA	NA	NA	<0.005			*1.400	*0.040	*2.130	
NA	NA	NA	0.03	0.202	5	0.120+	0.110+	0.095	0.086
NA	0.0003	NA	<0.01						
NA	<0.00015	NA	<0.01						
NA	<0.0001	NA	<0.01		1				
NA	<0.0001	NA	<0.05						
NA	<0.00005	NA	<0.01		0.7				
NA	<0.00015	NA	<0.01						
NA	<0.0003	NA	<0.05						
			<0.01						
			<0.01						
			<0.01						
			<0.01						
					0.0005				

TABLE 3-3

RESULTS OF WET WEATHER FIELD SCREENI
PATRIOT AND FARRINGTON STREET (R2)

Parameter	Units	No. of Data Points	Date 2/26/93	3/2/93	3/16/93	3/25/93	4/8/93	4/28/93	Averag
Rainfall Amount	inches	6	0.41	1.78	2.7	0.24	1.17	0.53	1.14
Duration of Rain Event	minutes	4	NA	324	NA	14	332	18	172.0(
Date of Previous Rain	date	5	NA	2/25/93	3/12/93	3/20/93	4/4/93	4/16/93	NA
pH	--	4		7.4	7.9	7.5	7.6		--
Temperature	°F	4		64.0	55.0	58	63		60
Total Chlorine Residual	mg/l	4		0	0.25	0	0		0.06
Oil and Grease	mg/l	5	2.98	7.0	8.5	4.30	2	NA	4.95
Fecal Coliform	colonies/100 ml	3		>6000	<100		150		445
Fecal Streptococcus	colonies/100 ml	3		>10.000	<100		440		756
Fecal Coli/Strep	--	--		0.6	1		0.34		
Cyanide	mg/l	5	0.187	<0.02	0.173	0.298	<0.02	NA	0.14
Phenol	mg/l	5	0.0075	<0.02	0.00325	0.014	<0.02	NA	<0.02
Total Suspended Solids	mg/l	4	8		35	32	48		30.75
Total Dissolved Solids	mg/l	4	416.0		420	202	170		302
BOD (5)	mg/l	4	12.0		10	9	10		10.3
COD	mg/l	2	61.0			56.6	NA	NA	58.8
TKN	mg/l	3	1.3		0.91	1.02	NA	NA	1.09
NO(2) + NO(3)	mg/l	2	--		<0.01	0.084	NA	NA	0.047
Total Ammonia	mg/l	3	0.4		0.07	0.19	NA	NA	0.22
Organic Nitrogen	mg/l	3	0.93		0.84	0.83	NA	NA	0.87
Total Phosphorus	mg/l	3	0.589		0.809	0.370	NA	--	0.59
Dissolved Phosphorus	mg/l	2	0.084		0.119	--	--	--	0.102
Metals									
Antimony	mg/l	2		<0.005	<0.020		NA	NA	<0.02(
Arsenic	mg/l	2		<0.005	<0.010		NA	NA	<0.01(
Beryllium	mg/l	2		<0.001	<0.020		NA	NA	<0.02(
Cadmium	mg/l	2		<0.001	0.0023		NA	NA	0.0016
Chromium	mg/l	2		<0.001	<0.010		NA	NA	<0.01
Copper	mg/l	2		0.008	0.031		NA	NA	0.020
Lead	mg/l	2		0.004	<0.005		NA	NA	0.0045
Mercury	mg/l	2		<0.0002	<0.002		NA	NA	<0.002
Nickel	mg/l	2		0.007	<0.010		NA	NA	0.0085
Selenium	mg/l	2		<0.010	<0.005		NA	NA	<0.01
Silver	mg/l	2		<0.001	<0.002		NA	NA	<0.002
Thallium	mg/l	2		<0.005	<0.010		NA	NA	<0.01
Zinc	mg/l	2		0.05	0.144		NA	NA	0.097
Volatile Organics									
Chloroform	mg/l	4	0.0029	<0.01	0.0017	NA	<0.01	NA	<0.01
1,1,1-Trichloroethane	mg/l	4	0.00029	<0.01	<0.0003	NA	<0.01	NA	<0.01
Toluene	mg/l	4	0.00029	<0.01	<0.0002	NA	<0.01	NA	<0.01
Chlorobenzene	mg/l	4	0.00037	<0.01	<0.0002	NA	<0.01	NA	<0.01
Ethyl Benzene	mg/l	4	<0.00005	<0.01	<0.0001	NA	<0.01	NA	<0.01
Bromodichloromethane	mg/l	4	0.00043	<0.05	0.00064	NA	<0.05	NA	<0.05
Chloromethane	mg/l	4	<0.0003	<0.05	<0.0003	NA	<0.05	NA	<0.05
Base Neutral and Acid Extractables									
Phenol	mg/l	1	0.00161		NA				<0.01
Diethyl Phthalate	mg/l	1	0.00062		NA				<0.01
Dibutyl Phthalate	mg/l	1	0.0024		NA				<0.01
Bis (2-ethylhexyl) Phthalate	mg/l	1	0.00311		NA				<0.01
Pesticides	mg/l	1	BQL		NA		NA		BQL
PCBs	mg/l	1	BQL		NA		NA		BQL

NA Analysis not available at time of report.
/p/ Proposed criterion.
* Insufficient data to develop criteria. Value presented is the L.O.E.L. (lowest observed effect level).
+ Hardness dependent criteria (value will increas if hardness is greater than 100 mg/l CaCO(3)).

TABLE 3-3

ULTS OF WET WEATHER FIELD SCREENING
PATRIOT AND FARRINGTON STREET (R2)

25/93	4/8/93	4/28/93	Average	NURP	Primary Drinking Water Standards (MCL)	EPA Fresh Water Acute	EPA Fresh Water Chronic	EPA Marine Water Acute	EPA Marine Water Chronic
0.24	1.17	0.53	1.14						
14	332	18	172.00						
20/93	4/4/93	4/16/93	NA						
7.5	7.6		--				6.5 - 9		6.5 - 8.5
58	63		60						
0	0		0.06			0.019	0.011	0.013	0.0075
4.30	2	NA	4.95						
	150		445						
	440		756						
	0.34								
.298	<0.02	NA	0.14						
.014	<0.02	NA	<0.02						
32	48		30.75	180					
202	170		302		500	None			
9	10		10.3	12					
56.6	NA	NA	58.8	82					
1.02	NA	NA	1.09	1.9					
.084	NA	NA	0.047		10				
0.19	NA	NA	0.22						
0.83	NA	NA	0.87						
.370	NA	--	0.59	0.42					
--	--	--	0.102	0.15					
	NA	NA	<0.020			/p/.088	/p/.030	/p/1.500	/p/.500
	NA	NA	<0.010		0.05	none			
	NA	NA	<0.020			*0.130	*0.0053		
	NA	NA	0.00165		0.005	0.0039+	0.0011+	0.043	0.0093
	NA	NA	<0.01		0.1	0.013	0.011	1.100	0.050
	NA	NA	0.020	0.43	1.0	0.018+	0.012+	0.0029	
	NA	NA	0.0045	0.182	0.050	0.083+	0.0032+	0.220	0.0085
	NA	NA	<0.002		0.002	0.0024	0.000012	0.0021	0.000025
	NA	NA	0.0085		--	1.400+	0.160+	0.075	0.0083
	NA	NA	<0.01		0.05	0.020	0.005	0.300	0.071
	NA	NA	<0.002			0.0041+/p/.00092	0.00012	0.0023/p/.0072	/p/.00092
	NA	NA	<0.01			*1.400	*0.040	*2.130	
	NA	NA	0.097	0.202	5	0.120+	0.110+	0.095	0.086
NA	<0.01	NA	<0.01						
NA	<0.01	NA	<0.01						
NA	<0.01	NA	<0.01		1				
NA	<0.01	NA	<0.01						
NA	<0.01	NA	<0.01		0.7				
NA	<0.05	NA	<0.05						
NA	<0.05	NA	<0.05						
			<0.01						
			<0.01						
			<0.01						
			<0.01						
	NA		BQL		0.0005				
	NA		BQL						

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APPENDIX P

COASTAL ZONE MANAGEMENT CONSISTENCY DETERMINATION

State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JOHN P. ALES
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

Date 11-9-92

LOCAL PROGRAM TRANSMITTAL LETTER

Enclosed are ____ applications which have projects in your parish.

Parish#	CUP#	Analyst	State	Local	Reason
JEFFERSON	P921140			✓	214.2(a)

Terry W. Howey, Director

Initialed by:

W.P.

RECEIVED
NOV 18 1992

JEFFERSON PARISH
LOUISIANA

JOHN J. UHL
ADMINISTRATOR
COASTAL ZONE
MANAGEMENT PROGRAM

May 18, 1993

Mr. Thomas A. Sands
4500 One Shell Square
New Orleans, LA 70139

RE: JP-93-02, P921140; Coastal Use Permit Application
Estelle Plantation Partnership
Construction and maintenance of a
public golf course. Also, construction
of streets and other appurtenant
structures for residential and commercial
development surrounding the golf course.
Sections, 7, 82, 85, & 89, T14S-R23E
Jefferson Parish, LA

Dear Mr. Sands:

In accordance with the Jefferson Parish Coastal Zone Management Program's Procedures and Authorities to Regulate Uses of Coastal Concern in Jefferson Parish, Part E.2 (La. R.S. 49:214.34.A.1 & 2), activities occurring wholly within a fastland do not generally require a permit since there is normally no direct and significant impact on coastal waters. However, if a proposed use will result in discharges into coastal waters, or significantly change existing water flow into coastal waters, a Coastal Use Permit may be required.

Jefferson Parish is concerned that, due to the large size of the proposed project, the stormwater runoff from the golf course and associated residential and commercial development may have a significant impact on coastal waters.

Therefore, to ensure there will be no direct and significant impact on the Coastal Waters of Jefferson Parish, we request the applicant agree to comply with that condition detailed on the attached plat. The applicant's acceptance of this condition, by signing where indicated, will ensure that present and future operations of any and all activities associated with the proposed use will have no significant impact on coastal waters; thereby qualifying the referenced activity for a fastland determination.

If you have any questions or require further information, please contact Foster Voelker at (504) 838-4230.

Sincerely,

John Uhl

JU:FV:ed

attachments

cc: Terry Howey, Department of Natural Resources/
Coastal Management Division
Ron Ventola, Corps of Engineers
Larry Weisepape, Louisiana Department of Environmental Quality
B. K. Sneed
Marnie Winter
Foster Voelker

JP-93-02; DNR CUP #P921140; COE # Jefferson Parish Wetland 238
Estelle Plantation Partnership

To the maximum extent practical, the applicant shall ensure that any and all stormwater discharges resulting from the proposed activity will not significantly impact coastal waters of Jefferson Parish. To this end, the use of golf course lakes as retention ponds shall be planned, sited, designed, constructed, operated, and maintained to avoid, to the maximum extent practical, significant impacts on coastal waters resulting from the construction of the golf course and all associated commercial and residential development.

The applicant does hereby agree to comply with the foregoing condition; and requests that this sheet be included in the plats and thereby be a part of the official application.

Thomas A. Carrere,
Managing General Partner
Estelle Plantation Partnership

Thomas A. Sands
Agent

APPENDIX Q

REAL PROPERTY ASSOCIATES & COMPANY
MAY 15, 1996 FINANCIAL FEASIBILITY ANALYSIS

PRELIMINARY FINANCIAL FEASIBILITY ANALYSIS OF

Estelle Plantation
Located On The East Side Of The
Lafitte-Larose Highway South of Barataria Boulevard
Jefferson Parish, Louisiana

PREPARED FOR

Mr. Tac Carrere
111 Veterans Memorial Boulevard
Metairie, LA 70005

PREPARED BY

Wade R. Ragas, PHD, MAI
Louisiana State Certified
General Real Estate Appraiser, #0043
and
Robert L. Ryan
Of
Real Property Associates & Company
P.O. Box 74233
Metairie, LA 70033

PREPARED ON

May 15, 1996

RPA/ Real Property Associates & Company

WADE R. RAGAS, Ph.D.
President

Financial Analysis

Market Feasibility

Investment Counseling

Property Valuation

May 16, 1996

Mr. Tac Carrere
Estelle Plantation
111 Veterans Blvd., Suite 1600
Metairie, Louisiana 70005

Dear Mr. Carrere:

Based on existing levels of lot demand on the Westbank of Jefferson Parish, current lot prices and current subdivision development costs, we have conducted a financial feasibility analysis of the Estelle Plantation golf community. The existing rate of market need for residential lots would warrant the provision of at least four lots per month not on a golf course and two lots per month on the course. The current market absorption rate (demand) of six lots per month is likely to grow over the next several years as employment in West Jefferson expands.

Based on a modest growth in demand from 72 lots in mid-1998 to a peak demand of 96 lots per year by 2003, the proposed golf community would be very successful. The average rate of lot sales over its nine years of sales would be 77 lots per year. The Charles Lassar study of the project, based on a totally different methodology, forecast a long term demand of 76 lots per year. Historically, the other major golf course communities in Jefferson, the Eastbank of St. Charles and Western St. Tammany have achieved lot sales rates of 84 per year. The project, based on the market demand currently present and current development costs, is financially feasible.

We have also sought to estimate the minimum market lot demand necessary to warrant land development under your proposed land use plan. Our analysis produces a financial breakeven with a 15% rate of return on the land investment and a 10% developer profit at an average lot absorption rate of 55 lots per year. A long term demand of less than five lot sales per month is barely faster than the typical Westbank subdivision without a golf course.

The combination of a public golf course with a modestly priced residential community produces a unique match to market needs.

The golf course will be able to offer green fees at a level far below private courses because it does not have to recover land costs or street access costs. This is only possible because of a land donation by Estelle Plantation to Jefferson Parish. Simultaneously, the creation of a golf course created an amenity for the remaining Estelle acreage which enhances its price in the marketplace without imposing the cost of building the golf course. The Estelle Plantation residential community can afford to sell unusually large lots for prices lower than normally available in a golf course community in the New Orleans area. The break-even level of market demand becomes a modest five lots per month. The total sellout time of 13.7 years is still similar to the historical average of about 13 years for other similar projects in the New Orleans area.

This beneficial outcome for the public is only possible through the joint development of a public course with a residential community. Separate development of a 200 acre municipal course with substantial green space at today's Westbank residential land costs of about $16,000 per acre would impose an over $3 million additional cost on the public golf course.

We will be available to meet with you and other property owners at your convenience to discuss our conclusions.

Sincerely,

Wade R. Ragas, PhD, MAI

WRR/ymr

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PURPOSE OF THE ANALYSIS

The purpose of this report is to test the Highest and Best Use of the subject by estimating the Investment Value of the subject property if it were developed into a planned golf course community. This analysis is not an appraisal report or to be considered in any form an indication of market value to a typical purchaser. The purpose of this report is to test the financial feasibility of the proposed community and establish the minimum level of market demand necessary for there to be a "market need".

Feasibility is defined by the Dictionary of Real Estate Appraisal published by the American Institute of Real Estate Appraisers as "An indication that a project has a reasonable likelihood of satisfying explicit objectives". Or to apply to the subject of this analysis, is there enough demand at anticipated lot prices and development costs to create a reasonable return to allow the property owner to develop the site. The subject's feasibility was studied using previous studies of sales patterns of golf course communities, lot sales activities of currently active Jefferson Parish subdivisions, development cost on other subdivisions in the Barataria Corridor and preliminary plans for the community.

If it is determined that the project is financially feasible, then there is a market need for the project as tested. The project as tested in this analysis involves an integrated project containing a municipal golf course with an additional 303 acres of single family homes adjoining the course fairways. The community as tested requires the construction of the integrated course throughout the community.

THE PROCESS OF ANALYSIS

The process, as presented herein, contains an analysis of all the ingredients in the development of the subject site as proposed by the current property owners. Development costs, lot sales, general overhead and debt structure are considered to determine the Investment Value of the subject site. Two analyses are presented using similar formats. The first analysis considers reasonable expectations for the project as concluded by the author's research of average income and golf course communities. The second analysis uses the same assumptions contained in the first, except the rate of lot sales are lowered to determine the approximate point when the Investment Value equals the estimated current market value of the site. This is the minimum lot absorption rate necessary for there to be a market need for the project.

RPA/ P.0. Box 74233, Metairie, Louisiana 70033 / 504-456-2823

ASSUMPTION AND LIMITING CONDITIONS

1. Information, estimates, and opinions furnished to the authors and contained in the report were obtained from sources considered reliable and believed to be true and correct. The acreage contained in the golf course area, street right-of-ways, and under lots have been estimated by authors using preliminary drawings performed by Richard Lambert, P.E. However, no responsibility for accuracy of such items furnished the authors can be assumed by the authors.

2. No responsibility is assumed for legal matters. The authors are not required to give testimony or appear to court because of having made the report with reference to the property in question, unless arrangements have been made previously.

3. The author assumes that there are no hidden or unapparent conditions of the property, subsoil or structures which would render it more or less valuable. The appraiser assumes no responsibility for such conditions, or for engineering which might be required to discover such factors. The author further assumes no responsibility for political, social, or economic changes which would have an affect on real estate values after the date of this valuation.

4. The authors have relied upon the land plan provided as noted. Changes in the number of lots or configuration of the community could impact the analysis contained in this study.

5. The fee for the investigation and preparation of this report is not in any way contingent upon the conclusions herein reported, nor contingent upon anything other than the delivery of this report. The fee for making this report does not include any court testimony of pretrial conferences.

CERTIFICATION OF AUTHORS

The undersigned does hereby certify that, except as otherwise noted in this appraisal report:

1. I have no present or contemplated future interest in the real estate that is the subject of this report.
2. I have no personal interest or bias with respect to the subject matter of this report or the parties involved.
3. My compensation is not contingent on any action or evident resulting from the analysis, opinions or conclusions in, or the use of, this report.
4. To the best of my knowledge and belief, the statements of fact contained in this report, upon which the analyses, opinions, and conclusions expressed herein are based, are true and correct.
5. This report sets forth all of the limiting conditions (imposed by the terms of my assignment or by the undersigned) affecting the analyses, opinions, and conclusions contained in this report.
6. This appraisal report has been made in conformity with the Uniform Standards of Professional Appraisal Practice and is subject to the reporting requirements of the Appraisal Institute.
7. No one other than the undersigned prepared, or contributed significantly to, the analyses, conclusions, and opinions concerning the real estate that are set forth in this appraisal report.
8. I have made a personal inspection of the property that is the subject of this report.
9. The analyses, opinions and conclusions were developed, and this report was prepared, in conformity with the Uniform Standards of Professional Appraisal Practice ("USPAP"), except that the Departure Provision of the USPAP does not apply.
10. Compensation is not contingent upon the reporting of predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
11. This assignment was not based on a requested minimum valuation, a specific valuation, or conclusion.

DATE: _____ ANALYST _____

Wade R. Ragas, PhD, MAI
Louisiana State Certified
General Real Estate Appraiser #0043.

DATE: _____ ANALYST _____

Robert L. Ryan

WADE R. RAGAS PhD, MAI
APPRAISER QUALIFICATIONS

Education

Doctorate in Business Administration (Real Estate and Urban Analysis) from the Ohio State University, 1976
Masters in Business Administration, University of New Orleans, 1971
Bachelor of Arts in Economics, University of New Orleans, 1969

Professional Certifications or Honors

Endowed Research Professorship in Real Estate Finance, UNO, 1991
Senior Residential Appraiser, 1984, Senior Real Estate Analyst, 1990, Member Appraisal Institute, 1991, The Appraisal Institute
Weimer Fellow, Homer Hoyt Institute, 1991-92
Certified General Appraiser, Louisiana 1990 #0043
Research Fellow, Texas Real Estate Center, 1993

Professional Associations

American Bar Association Anti-Trust Section (Associate Member)
American Real Estate and Urban Economics Association
Society of Office and Industrial Realtors, Academic Association
Appraisal Institute, SRA, SREA, & MAI

Employment Summary

Endowed Research Professor in Finance, 1991
Director of Real Estate Market Data Center, 1986-Current
Full Professor of Finance, University of New Orleans, 1987-Current
Doctoral Research Fellow, Ohio State University, 1973-1975
Assistant Vice-President, Pringle-Associated Mortgage Corporation, 1972-1973
(mortgage and construction lending)
Assistant Vice-President, Smolkin-Siegel Corporation, 1971-1972
(national real estate market research)

Publication Summary

Applied Residential Property Valuation, Society of Real Estate Appraisers, 1981, revised 1985 (required nationally for SRA designation)

New Orleans Real Estate Market Analysis, University of New Orleans, 1978-Current (semi-annual 100 page monograph)

Publication Summary (Continued)

Articles in Land Economics, Appraisal Journal, Real Estate Appraiser and Analyst, Journal of Real Estate Finance and Economics, Real Estate Review, Journal of Urban Land, Journal of Refugee Resettlement, Economic Development Quarterly, Environmental Watch, Journal of the Society of Office and Industrial Realtors, Louisiana Business Survey, Journal of the Texas Real Estate Center, Journal of Real Estate Research, and Review of Financial Economics.

Papers presented at national meetings: American Real Estate and Urban Economics Association, Southern Economics Association, Eastern Finance Association, North American Economics and Finance Association, Associated Catholic Charities, National Conference on Social Welfare, AREUEA, Weimer School of Homer Hoyt Institute.

Expert Witness

Federal District Court: Anti-Trust, Valuation, and
S&L Board of Director Responsibilities
Louisiana Civil Courts: Valuation, Eminent Domain
U.S. Senate Select Committee on Immigration

Reviewer

Irwin Books AIREA Dryden Press Wiley, Inc.

Question contributor and reviewer
Education Testing Service ASI, Inc.

Ad hoc reviewer Journal of the American Real Estate and Urban Economics Association, Economic Development Quarterly and Journal of Real Estate Research.

Member, board of reviewers, Review of Business and Economic; Professional Report of the Society of Industrial and Office Realtors.

Education and Instruction Experience

Undergraduate and graduate instruction in real estate finance, investments, site and market feasibility analysis, and real estate valuation.

Doctoral course instruction in real estate finance.

Education and Instruction Experience (Continued)

SREA Course 102 & 101, national administrative instructor, instructed at 17 sites 1978-1991.

SREA Course 201 instructor, approved national administrative instructor.

Appraisal Institute approved instructor equivalent Residential and Commercial Courses

Short courses on Condominiums, Energy Efficient Housing, Residential Valuation, Owner Financing, Wetlands, Income Property Analysis and Property Management, Real Estate Markets, offered throughout Louisiana and selectively, nationally.

Member, Academic Liaison Committee of American Institute of Real Estate Appraisers 1983-1985.

SREA committee on recertification, national.

Author, SREA Louisiana certification materials.

Appraisal Foundation Qualification Board task-force on appraisal examination content; task force on review of course materials.

Residential Continuing Education and Seminars, National Chairperson, Appraisal Institute, 1990-1991.

Residential Education Board, Appraisal Institute, 1990-1991.

Contractor to Appraisal Qualifications Board (national) to advise on process for reviewing and evaluating state certification exams.

Board of Directors

Mutual Savings and Loan, Metairie, LA 1984-current.
Historic Restoration Inc., Advisory Board, New Orleans, LA
New Orleans Apartment Association, Metairie, LA

Valuation Assignments

Wide range of property types including office buildings, subdivisions, hotels, golf courses, vacant parcels, trailer parks, housing, condominiums, timeshares, mix use development, and industrial properties. Assignments have included opinions of market value, market feasibilities analysis, reviewers of appraisals and investment analysis.

ROBERT L. RYAN
APPRAISER QUALIFICATIONS

Education and Technical Training:

M.B.A., Real Estate Emphasis,
University of New Orleans, 1991.

B.S., Marketing,
University of New Orleans, 1989.

Appraisal Institute:	Real Estate Appraisal Principals (1992) Basic Valuation Procedures (1992) Standards of Professional Practice (1992) Basis Income Capitalization (1993) Advanced Income Capitalization (1993)
University of New Orleans:	Principles of Real Estate (1988) Residential Real Estate Development (1988) Real Estate Finance and Marketing Feasibility Analysis (1990) Financial and Economic Analysis for Real Estate (1990) Mortgage Markets and Real Estate Finance (1991)

Experience:

Real Estate Appraisal

September 1993 to Present	Independent Fee Appraiser Central Appraisal Bureau, Inc., Metairie, Louisiana Real Property Associates, Inc., Metairie, Louisiana
March 1993 to August 1993	Real Estate Appraiser Argote, Derbes, Graham, Shuffield & Tatje, Inc., Metairie, Louisiana

Real Estate Research Experience

June 1990 to February 1993	Researcher Real Property Associates, Inc., Metairie, Louisiana
January 1989 to February 1993	Market Analysts, Real Estate Market Data Center, University of New Orleans, New Orleans, Louisiana

Professional Associations:

MAI Candidate Member of the Appraisal Institute - #M920927

ROBERT L. RYAN
APPRAISER QUALIFICATIONS
(Page 2)

Publications:

An Identification of Potential Sites for a Deep Water Port Facility on the West Bank of Jefferson Parish, University of New Orleans, 1993.

Professional Report of the "Forecasting Office Space Demand and Office Space per Worker Estimates", Society of Industrial and Office Realtors, January 1992.

"Apartment Operating Expenses New Orleans and Comparable Cities", University of New Orleans, 1991 as part of New Orleans Real Estate Report.

Valuation Assignments

Wide range of property types including apartments, bank branches, churches, office buildings, retail properties, single-family homes, subdivisions, tank farms, vacant parcels, and warehouse properties. Assignments have included opinions of market value, market feasibilities analysis, and investment analysis. Clients include law firms, commercial banks, savings and loans, and RTC.

PROPOSED COMMUNITY DESCRIPTION

Location

Located on the west bank of Jefferson Parish fronting on the east side of the Lafitte-Larose Highway approximately two miles south of Barataria Boulevard (Louisiana Highway 45). A map showing the subject's location is contained on the following page. The subject neighborhood is known as the Barataria Corridor located on the "West Bank" of the Mississippi River, in Jefferson Parish. The property is located approximately nine miles southeast of the New Orleans Central Business District.

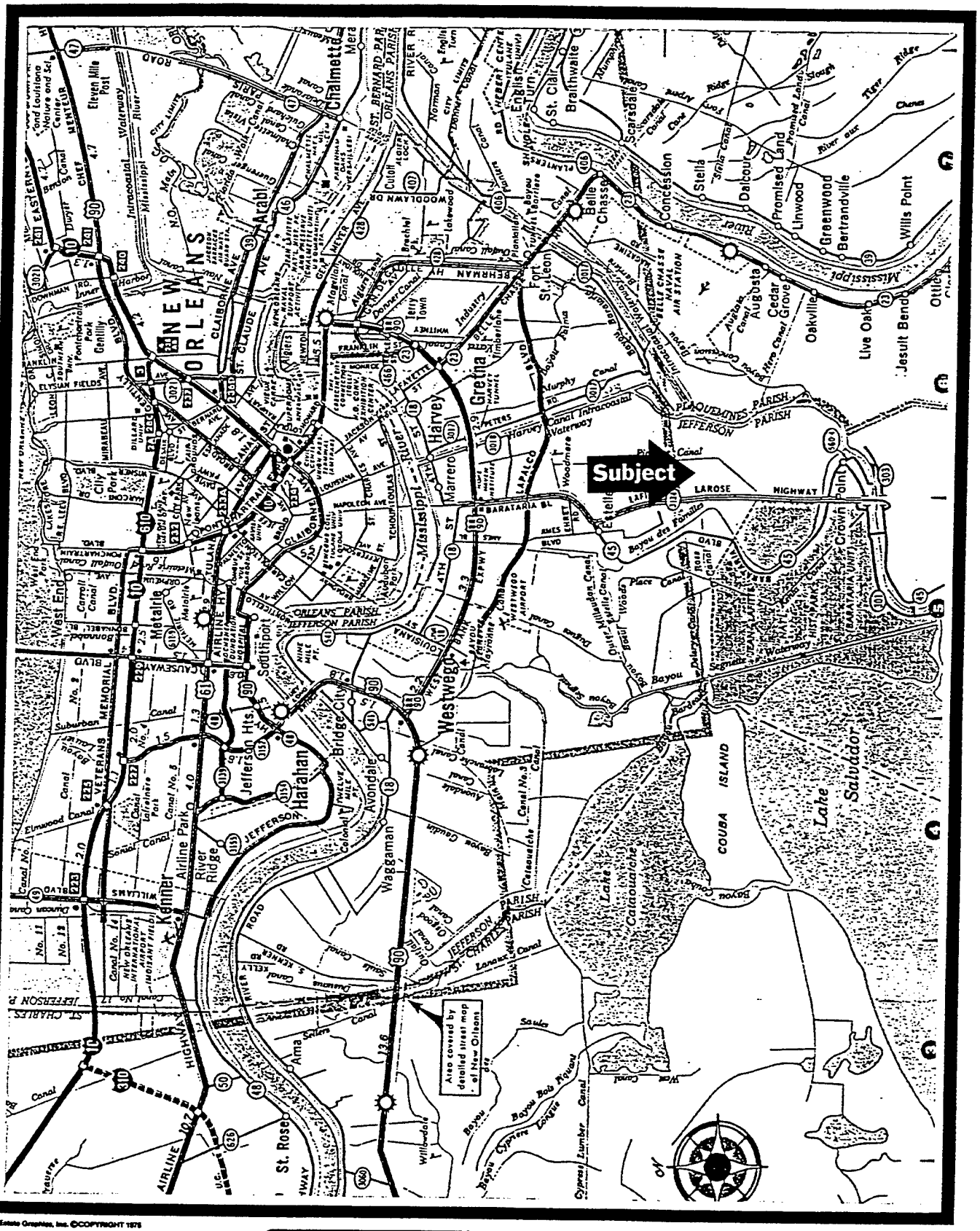
Accessibility

The primary east/west arteries in the general area of the subject neighborhood are Lapalco Boulevard and the Westbank Expressway (U.S. Highway 90), which is north of Lapalco Boulevard. Lapalco Boulevard is a four to six lane artery that connects the Belle Chasse Highway with U.S. Highway 90 (near the Huey P. Long Bridge). The Westbank Expressway has both an elevated portion and a surface level portion. The completion of the elevated portion, which traverses the West Bank from the Greater New Orleans Bridge (in Orleans Parish) to Westwood Drive, has increased east/west traffic flow and enhanced accessibility to the Central Business District of New Orleans.

The major north/south thoroughfares in the neighborhood are Lafitte-Larose Highway, Barataria and Ames Boulevards. Barataria Boulevard runs from Fourth Street near the Mississippi River southward to the town of Lafitte. The Lafitte-Larose Highway is a four lane highway which was constructed to carry traffic from Barataria Boulevard south of Lapalco to the town of Lafitte. Ames Boulevard runs from Fourth Street near the Mississippi River, intersects with Barataria Boulevard about two miles south of Lapalco and extends into a developing residential area south and east of Barataria Boulevard and west of Lafitte and Larose.

Streets, Utilities & Drainage

Lafitte-Larose Highway is an asphalt four-lane, limited access roadway. All public utilities were either available or could have been extended to the subject property. The rear of the site contains the Estelle Pumping station which has had the subject area under drainage for over 30 years.



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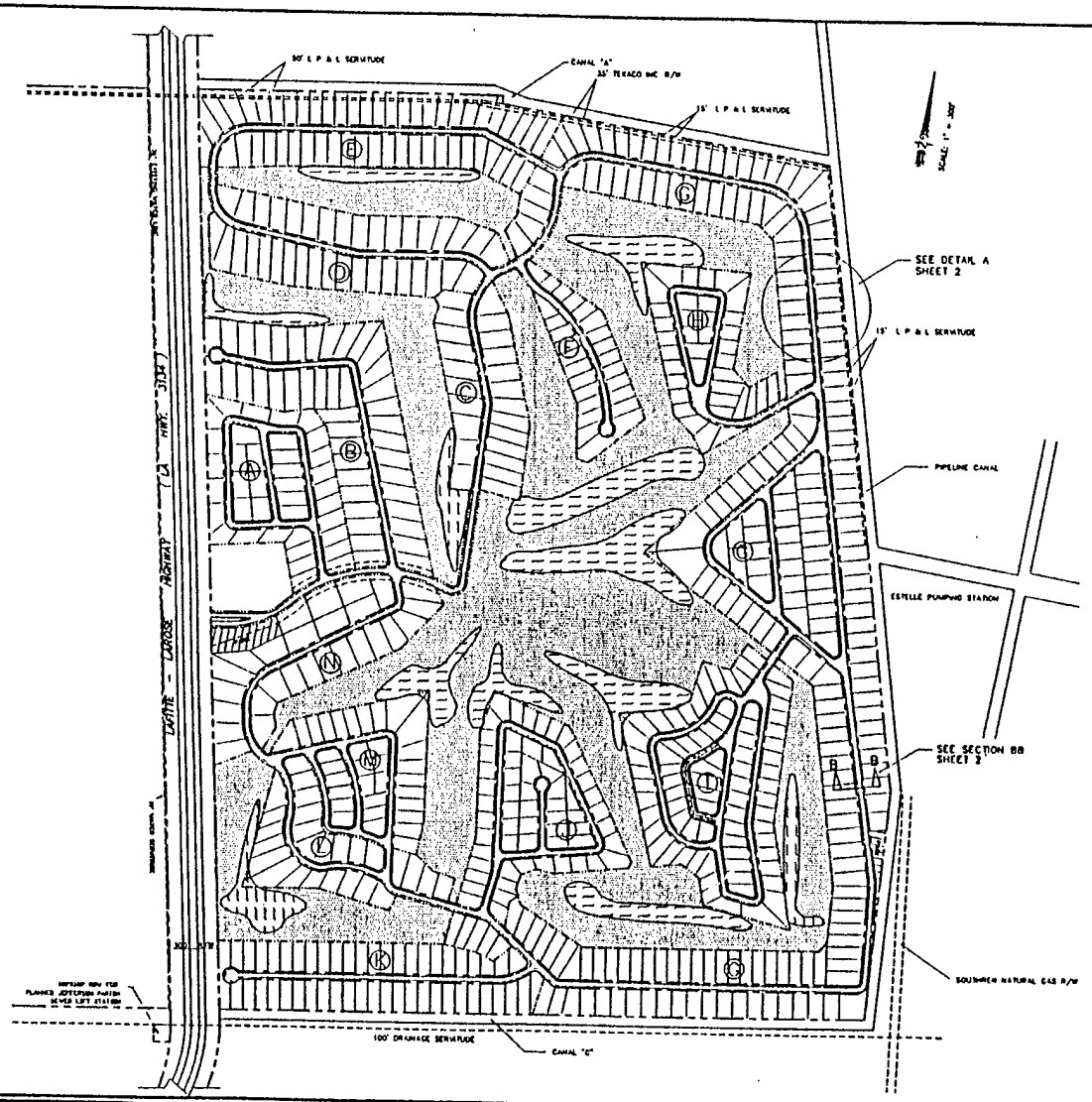
Regional Location

PROPOSED COMMUNITY DESCRIPTION
(Continued)

Description Of Proposed Development

The planned community would be located on the east side of the Lafitte-Larose Highway just south of the Louisiana Power and Light right-of-way. The golf oriented community would encumber a total of 503 acres which includes approximately 200 acres to be donated to Jefferson Parish to construct a municipal golf course. The remaining 303 acres (estimated by the authors) would be developed into 748 single-family home sites and street access. These estimates are based on preliminary plans performed by Richard C. Lambert, P.E. An estimate of the amount of streets by the authors indicates 46,435 linear feet of streets or an average of 62.07 linear feet per lot. The community has both adequate water and sewage lines available along the Lafitte-Larose right-of-way. A copy of the preliminary plan by Richard C. Lambert is contained on the following page.



LOT TYPE	LOT SIZE	GOLF LOTS	TOTAL LOTS
A	20,000 SF (100 X 200 TYP)	81	179
B	15,000 SF (85 X 175 TYP)	134	336
C	10,000 SF (75 X 135 TYP)	164	283
			748

RESIDENTIAL AREA	LOT TYPE	GOLF COURSE LOTS	TOTAL LOTS
A	B	0	38
B	A	23	43
C	A	23	23
D	A	32	38
E	B	24	52
F	C	28	28
G	B	95	218
H	C	27	36
I	C	44	77
J	C	32	60
K	C	18	50
L	B	15	37
M	C	17	33
N	A	13	22
		369	748

LOT LINES AND DIMENSIONS ARE SUBJECT TO CHANGE. SOME SERVITUDES REPRESENTED FOR REFERENCE ONLY, REFER TO SURVEY

GOLF COURSE

RETENTION PONDS

PRELIMINARY

NOT FOR FINAL USE

THIS PLAN IS CONCEPTUAL IN NATURE AND AND SHOULD NOT BE RELIED UPON AS A DEFINITIVE STATEMENT OF THE REQUIREMENTS FOR POTENTIAL DEVELOPMENT OF THIS PROPERTY. ALL DIMENSIONS ARE APPROXIMATE.

CONCEPTUAL PLAN

ESTELLE PLANTATION PARTNERSHIP

SEPTEMBER, 1994
SHEET 1

Development Costs

To develop the community concrete streets, fill and fencing are required. In Addendum A street development costs are presented for the project. The street costs have been estimated using Marshall Valuation Service. The street costs were calculated to be $243 per linear foot. According to Bruce Layburn of JBL Homes, the developer of Debattista Place and Ridgecrest subdivisions, the typical street cost has been between $240 and $280 per linear foot for small one or two street subdivisions. These costs are also consistent with those experienced by Sunrise Homes at the Shadowlake Subdivisions.

The fill costs are estimated to be $4.50 per cubic yard, which is considered typical for a project of this size and is supported as being reasonable by Richard Lambert, P.E. and other developers in the area. An engineering analysis by the engineering firm of Krebs, LaSalle and LeMieux prepared for a project near the subject site (Zaslow Tract located 1 mile south of the subject site) supports these cost estimates for both street and fill costs. They were also accepted by Judge Tienmann of the 24th Judicial District in his opinion of the Zaslow Case.

A copy of the development cost by phase is contained on the following page which is followed by the total development cost for the entire project. The land cost shown on the following page is based on a 1991 valuation upheld by the Parish Court on a site south of the subject community of $12,000 per acre and on expert reports performed by Real Property and Richard Brewster, MAI on sites located west of the subject as of 1996 for $16,000 per acre. This is not an indication of the subject's value, but an estimate for the feasibility of the subject development. It is likely that the market value of the subject site (if available for development) is substantially higher under the proposed development plan.

Street Cost

The exact lots to be absorbed for each phase have not been calculated due to the preliminary nature of the information available. Instead, typical per lot cost analysis has been used for each phase of development. A total of 46,425 linear feet has been scaled by the author which indicates an average of 62.07 linear feet of street per lot. This is higher than typical given the irregularly shaped lots and golf course plan. The average amount of street required per lot was multiplied by the number of lots in each phase to indicate the total amount of streets required for each phase.

Fill Cost

An exact estimate of the fill required for the subject community is unknown. An allowance of 1.5 feet of fill, or an allowance of $11,000 per acre was applied to the area not contained under the Golf Course. The required top of slab elevation is likely to only be +1.5 MSL (mean sea level) for sites within the Westbank Hurricane Protection Levee. To determine the amount of fill required for each phase the total 303.85 acres have been divided by the 748 lots estimated in the community to calculate an average area to be filled per lot of 17,695 square feet including associated street right-of-way. Multiplying this average fill area per lot times the number of lots in each phase indicates the acreage to be filled by phase.

Development Costs By Phase

Phase I - 125 Lots

Planning			$90,000
Gate & Guardhouse	$15,000	2	$15,000
Fill (Per Acre)	$11,000	50.78	$558,580
Street Costs (Linear Foot)	$245	7,759	$1,900,955
Engineering (3% Of Costs In Phase)			$76,936
Total Costs			$2,641,471

Phase II - 125 Lots

Fill (Per Acre)	$11,990	50.78	$608,852
Street Costs (Linear Foot)	$267	7,759	$2,072,041
Engineering (3% Of Costs In Phase)			$80,427
Total Costs			$2,761,320

Phase III - 125 Lots

Fill (Per Acre)	$12,709	50.78	$645,383
Street Costs (Linear Foot)	$283	7,759	$2,196,363
Engineering (3% Of Costs In Phase)			$85,252
Total Costs			$2,926,999

Phase IV - 125 Lots

Fill (Per Acre)	$13,091	50.78	$664,745
Street Costs (Linear Foot)	$292	7,759	$2,262,254
Engineering (3% Of Costs In Phase)			$87,810
Total Costs			$3,014,809

Phase V - 125 Lots

Fill (Per Acre)	$13,483	50.78	$684,687
Street Costs (Linear Foot)	$300	7,759	$2,330,122
Engineering (3% Of Costs In Phase)			$90,444
Total Costs			$3,105,253

Phase VI - 123 Lots

Fill (Per Acre)	$13,888	49.97	$693,979
Street Costs (Linear Foot)	$309	7,635	$2,361,670
Engineering (3% Of Costs In Phase)			$91,669
Total Costs			$3,147,318

Total Development Cost (Rounded)	**$17,597,000**
Land Cost (Rounded)	**$4,848,000**
Land & Development Cost (Rounded)	**$22,445,000**

* Street costs totals included allowances for inflation over the life of project.

Financing

Loan Terms

The analysts have inquired as to the possible financing for the proposed subdivision. A rate of 10% is market rate with up to a two point fee for planning and the development of the first phase of the community. A 70% loan to value of the cost of the first phase is used with all future other phases being financed by equity cash flows from the project. A conservative loan partial release rate of 1.3 times per lot for the first two phases (250 lots) is used in this analysis. The author has assumed nine months of planning and nine months of construction on the first phase of the development. Table 2 on the following page presents the loan and financing terms for the first phase of construction.

Loan & Financing Terms

Financing Assumptions

Interest Rate	10.0%
Points	2
Max. Authorized Loan	$1,849,030
Less:	
Interest Reserve	$50,000
Add'l Interest Fees	$0
Points	$36,981
Interim Loan Fee	$0
Direct Cost to Fund	$86,981
< Funds at Closing >	$1,762,049
To Be Disbursed	$1,762,049
Construction Period (Exc. Planning)	3
Avg. Draw Per Quarter 1 - 3	$30,000
Avg. Draw Per Quarter 4 - 6	$557,350

Construction Disbursement and Loan Balances

Start Quarter	Cash Disbursement	Accrued Interest	Quarter Interest	Loan Balance
0	$0	$0	$0	$0
1	$30,000	$750	$750	$30,750
2	$30,000	$1,500	$750	$61,500
3	$30,000	$2,250	$750	$92,250
4	$557,350	$16,184	$13,934	$663,533
5	$557,350	$30,117	$13,934	$1,234,817
6	$557,350	$44,051	$13,934	$1,806,100
Total	$1,762,049		$44,051	$1,806,100
	Draw Pmts		Interest	Loan Balance

Partial Release Assumptions

Total Number of Lots (First 2 Phases) *	250
Rate of Annual Lot Appreciation	5%
Loan Partial Release Rate	1.3
Min. Loan Repay Per Lot *	$9,392
Average Loan Per Lot *	$7,224

* Based on the first 2 phases only.

Lot Description

The preliminary plans of the community call for approximately three basic lot sizes ranging from 10,000 to 20,000 square feet with an approximate average of 14,000 square feet. For the purposes of this analysis no variation on lot size was considered, given the preliminary nature of the plans. According to these preliminary plans of the 748 home sites, 52% or 389 have golf course frontage.

Lot Pricing

Based on a previous analysis performed by Real Property, Barkley Estates lots had an average sales price of over $3.80 per square foot or over $40,000 per lot. Barkley Estates is a new community located on the north side of Lapalco Boulevard half a mile east of Barataria Boulevard. Extracted land value from improved lots in Bent Tree Subdivision just north of Estelle Plantation had per square foot land values of $3.76. Ridgecrest Subdivision just west of Bent Tree near the intersection of Barataria and Lafitte-Larose Highway had extracted per unit land values of over $4.00 per square foot for average income housing. The authors have estimated that the average future retail value for the subject lots should be approximately $45,000 for interior non golf course lots (or $3.21 per square foot) and $55,000 for golf course lots (or $3.93 per square foot) once lots sales begin at the end of 1997. The average retail lot prices are estimated to increase by 5% per year over the sellout period once sales begin.

Absorption

Absorption was estimated using a previous analysis performed by Real Property for Estelle Plantation on competing subdivisions and historic sales rates of golf course communities. The analysis of lots sales revealed that Barkley Estates had been averaging approximately 10 sales per quarter. However, when the last four months of 1995 are considered, an average of 8.25 sales per month took place which is the equivalent of 24.75 sales per quarter.

Southlake Village located in Kenner has been on line since August 1994. It had achieved 22 sales by year end 1994 which is approximately 4.4 sales per month. Woodlands, located in Belle Chasse, has been selling lots since the Fall of 1993. It has received an average 8.4 sales per quarter. Analysis we previously submitted of 11 average to above average income subdivisions on the Westbank of Jefferson, Orleans and Plaquemines supports a current lot absorption rate of 4 per month or 12 per quarter.

The subject community, like other communities, are estimated to a have a number of pre-sells during development. The demand in other communities studied supports an average quarterly absorption of 6 lots per quarter of golf course lots and 12 lots per quarter of non golf course lots with some increases in absorption as the community develops. The initial rate of sales of 18 per quarter or 72 per year is slower than the historic absorption of golf course communities in New Orleans MSA from 1970 to 1985. Near the end of the development the non golf course lots will sell out before the golf course lots causing an increase in the rate of golf course lot sales. A table on the following page outlines the anticipated absorption (lot sales) and revenues from lot sales. The absorption pattern as outlined is considered to be a conservative estimate of lot absorption, but is adequate to prove the feasibility of this development.

Lots Sales & Revenue

Quarter	*Culmative Lot Sales* Golf Lot Sales To Date	Non Golf Lot Sales To Date	Total Lot Sales To Date	*Lot Sales* Golf Lot Sales Quarter	Non Golf Lot Sales Quarter	*Lot Sales Prices* Golf Lot Prices	Non Golf Lot Prices	*Revenue From Sales* Golf Lot Revenue	Non Golf Lot Revenue
0	0	0	0	0		0	0		0
1	0	0	0	0		0	0		0
2	0	0	0	0		0	0		0
3	0	0	0	0		0	0		0
4	0	0	0	0		0	0		0
5	0	0	0	0		0	0		0
6	0	0	0	0		0	0		0
7	12	25	37	12	25	$55,000	$45,000	$660,000	$1,125,000
8	18	37	55	6	12	$55,688	$45,563	$334,125	$546,750
9	24	49	73	6	12	$56,384	$46,132	$338,302	$553,584
10	30	61	91	6	12	$57,088	$46,709	$342,530	$560,504
11	36	73	109	6	12	$57,802	$47,293	$346,812	$567,510
12	42	85	127	6	12	$58,525	$47,884	$351,147	$574,604
13	48	97	145	6	12	$59,256	$48,482	$355,536	$581,787
14	56	111	167	8	14	$59,997	$49,088	$479,974	$687,236
15	64	125	189	8	14	$60,747	$49,702	$485,974	$695,826
16	72	139	211	8	14	$61,506	$50,323	$492,049	$704,524
17	80	153	233	8	14	$62,275	$50,952	$498,199	$713,331
18	88	167	255	8	14	$63,053	$51,589	$504,427	$722,247
19	96	181	277	8	14	$63,841	$52,234	$510,732	$731,275
20	104	195	299	8	14	$64,640	$52,887	$517,116	$740,416
21	112	209	321	8	14	$65,448	$53,548	$523,580	$749,671
22	120	223	343	8	14	$66,266	$54,217	$530,125	$759,042
23	129	238	367	9	15	$67,094	$54,895	$603,845	$823,425
24	138	253	391	9	15	$67,933	$55,581	$611,393	$833,718
25	147	268	415	9	15	$68,782	$56,276	$619,036	$844,140
26	156	283	439	9	15	$69,642	$56,979	$626,774	$854,691
27	165	298	463	9	15	$70,512	$57,692	$634,608	$865,375
28	174	313	487	9	15	$71,393	$58,413	$642,541	$876,192
29	183	328	511	9	15	$72,286	$59,143	$650,573	$887,145
30	192	343	535	9	15	$73,189	$59,882	$658,705	$898,234
31	201	358	559	9	15	$74,104	$60,631	$666,939	$909,462
32	210	373	583	9	15	$75,031	$61,389	$675,276	$920,830
33	219	388	607	9	15	$75,968	$62,156	$683,716	$932,341
34	231	391	622	12	3	$76,918	$62,933	$923,017	$188,799
35	243	391	634	12	0	$77,880	$63,720	$934,555	$0
36	255	391	646	12	0	$78,853	$64,516	$946,237	$0
37	267	391	658	12	0	$79,839	$65,323	$958,065	$0
38	279	391	670	12	0	$80,837	$66,139	$970,041	$0
39	291	391	682	12	0	$81,847	$66,966	$982,166	$0
40	303	391	694	12	0	$82,870	$67,803	$994,443	$0
41	315	391	706	12	0	$83,906	$68,650	$1,006,874	$0
42	327	391	718	12	0	$84,955	$69,509	$1,019,460	$0
43	339	391	730	12	0	$86,017	$70,377	$1,032,203	$0
44	351	391	742	12	0	$87,092	$71,257	$1,045,105	$0
45	357	391	748	6	0	$88,181	$72,148	$529,085	$0

Average Quarter Absorption By Lot Type	9.2	10.0
Average Annual Absorption By Lot Type	36.6	40.1
Average Annual Absorption For Entire Community		76.7

SUMMARY OF CASH FLOWS

The following page outlines a summary of cash flows resulting from the development of the subject property.

Revenue

The first column after the quarter is the lot sales revenue column. This is the summation of the revenue from the previous table presented on lot sales and revenue by quarter.

Expenses

Selling and Marketing

Costs of sales include sales commission for the selling agent. Local realtors' commissions on lot sales generally range from 5% to 6%. For this analysis an overall average of 5% is considered to be appropriate. Marketing costs and advertising are included by the real estate brokerage within this fee.

Developer Fee

The developer is assumed to collect 10% of gross sales as they occurred as profit for overseeing the project.

Property Taxes

Property taxes are based on the current value of the subject property divided by the number of lots in the subdivision with an estimated allowance for the increased assessment on finished lots. The property taxes are then reduced as lots are absorbed by purchasers.

Overhead

Overhead is the cost of maintaining an office for the purpose of handling and overseeing the sales and construction of the development. An allowance of 10% of sales is estimated for their costs. Insurance, general operating costs and miscellaneous expenses are included in the 10% allowance.

Summary of Cash Flows

Quarter	*Revenue* Total Lot Sales Revenue	*Expenses* Development Costs*	Selling & Mkting	Dev. Fee	Property Taxes	Overhead	Total Exps.	Net Income To Land	*Debt Service* Interest Pmts.	Principal Pmts.	*Return On Investment* Cash Flow To Equity	Cumulative Cash Flow To Equity
0	$0	0	0	0	0	0	0	0	0	0	(4,848,000)	(4,848,000)
1	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,003,297)
2	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,158,593)
3	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,313,890)
4	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,469,187)
5	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,624,484)
6	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,779,780)
7	$1,785,000	0	89,250	178,500	8,308	178,500	454,558	1,330,442	45,153	347,494	937,796	(4,841,984)
8	$880,875	0	44,044	88,088	8,098	88,088	228,317	652,558	36,465	169,051	447,042	(4,394,942)
9	$891,886	0	44,594	89,189	7,889	89,189	230,860	661,026	32,239	169,051	459,736	(3,935,206)
10	$903,035	920,440	45,152	90,303	7,679	90,303	1,153,878	(250,843)	28,013	169,051	(447,907)	(4,383,113)
11	$914,322	920,440	45,716	91,432	7,470	91,432	1,156,490	(242,168)	23,786	169,051	(435,005)	(4,818,118)
12	$925,751	920,440	46,288	92,575	7,260	92,575	1,159,138	(233,387)	19,560	169,051	(421,998)	(5,240,116)
13	$937,323	0	46,866	93,732	7,051	93,732	241,382	695,942	15,334	169,051	511,557	(4,728,559)
14	$1,167,210	0	58,361	116,721	6,772	116,721	298,574	868,636	11,108	206,618	650,910	(4,077,649)
15	$1,181,800	0	59,090	118,180	6,492	118,180	301,942	879,858	5,942	206,618	667,298	(3,410,351)
16	$1,196,573	975,666	59,829	119,657	6,213	119,657	1,281,023	(84,450)	777	31,842	(117,068)	(3,527,420)
17	$1,211,530	975,666	60,576	121,153	5,934	121,153	1,284,483	(72,953)	0	0	(72,953)	(3,600,373)
18	$1,226,674	975,666	61,334	122,667	5,655	122,667	1,287,990	(61,316)	0	0	(61,316)	(3,661,688)
19	$1,242,007	0	62,100	124,201	5,375	124,201	315,877	926,130	0	0	926,130	(2,735,558)
20	$1,257,532	0	62,877	125,753	5,096	125,753	319,479	938,053	0	0	938,053	(1,797,505)
21	$1,273,252	1,004,936	63,663	127,325	4,817	127,325	1,328,066	(54,815)	0	0	(54,815)	(1,852,320)
22	$1,289,167	1,004,936	64,458	128,917	4,538	128,917	1,331,766	(42,599)	0	0	(42,599)	(1,894,918)
23	$1,427,271	1,004,936	71,364	142,727	4,224	142,727	1,365,978	61,293	0	0	61,293	(1,833,625)
24	$1,445,112	0	72,256	144,511	3,909	144,511	365,187	1,079,924	0	0	1,079,924	(753,701)
25	$1,463,176	0	73,159	146,318	3,595	146,318	369,389	1,093,786	0	0	1,093,786	340,085
26	$1,481,465	1,035,084	74,073	148,147	3,281	148,147	1,408,732	72,733	0	0	72,733	412,819
27	$1,499,984	1,035,084	74,999	149,998	2,967	149,998	1,413,047	86,936	0	0	86,936	499,755
28	$1,518,733	1,035,084	75,937	151,873	2,653	151,873	1,417,421	101,313	0	0	101,313	601,068
29	$1,537,718	0	76,886	153,772	2,339	153,772	386,768	1,150,949	0	0	1,150,949	1,752,017
30	$1,556,939	0	77,847	155,694	2,025	155,694	391,259	1,165,680	0	0	1,165,680	2,917,697
31	$1,576,401	1,049,106	78,820	157,640	1,710	157,640	1,444,916	131,484	0	0	131,484	3,049,181
32	$1,596,106	1,049,106	79,805	159,611	1,396	159,611	1,449,529	146,577	0	0	146,577	3,195,758
33	$1,616,057	1,049,106	80,803	161,606	1,082	161,606	1,454,202	161,855	0	0	161,855	3,357,613
34	$1,111,816	0	55,591	111,182	663	111,182	278,617	833,199	0	0	833,199	4,190,812
35	$934,555	0	46,728	93,455	244	93,455	233,883	700,672	0	0	700,672	4,891,484
36	$946,237	0	47,312	94,624	(175)	94,624	236,385	709,852	0	0	709,852	5,601,336
37	$958,065	0	47,903	95,806	(593)	95,806	238,923	719,142	0	0	719,142	6,320,478
38	$970,041	0	48,502	97,004	(1,012)	97,004	241,498	728,543	0	0	728,543	7,049,021
39	$982,166	0	49,108	98,217	(1,431)	98,217	244,110	738,056	0	0	738,056	7,787,077
40	$994,443	0	49,722	99,444	(1,850)	99,444	246,761	747,682	0	0	747,682	8,534,759
41	$1,006,874	0	50,344	100,687	(2,269)	100,687	249,450	757,424	0	0	757,424	9,292,183
42	$1,019,460	0	50,973	101,946	(2,688)	101,946	252,177	767,282	0	0	767,282	10,059,466
43	$1,032,203	0	51,610	103,220	(3,107)	103,220	254,944	777,259	0	0	777,259	10,836,724
44	$1,045,105	0	52,255	104,511	(3,525)	104,511	257,751	787,355	0	0	787,355	11,624,079
45	$529,085	0	26,454	52,908	(3,735)	52,908	128,536	400,548	0	0	400,548	12,024,627
Total	$46,532,947	$15,835,121	$2,326,647	$4,653,295	$166,709	$4,653,295	$27,635,067	$18,897,880	$218,376	$1,806,877	$12,024,627	

* Development Cost Funded By Equity Only

Net Income To Land

The difference between the Revenue and Expenses is usually referred to as Land Income. This is the income to the investor before debt service. The only debt on the property is the single loan for the first phase development.

Debt Service

The debt service is for a single loan for the first phase development cost which is paid off early in the development cycle of the property.

Net Earnings On Investment

Presented are both the cash flow to equity and the cumulative cash flow to equity. This is the profit to the investor after debt service and all expenses. It is net of the land value of $16,000 per acre.

Conclusions Of Analysis

Cumulative Equity Cashflow	$12,024,627
Cumulative Subdivision Costs	$38,280,121
Authorized Loan	$1,806,100
Equity Contribution	($4,848,000)
Gross Sellout	$46,532,947
Years To Sellout	
After Initial Streets	9.75

Investment Value of Land Equity	$5,468,000
15% Before Tax Rate of Return	
Investment Value Per Acre	$18,046
Assumed Initial Land Value	$16,000

MINIMUM DEMAND REQUIRED

Using the previous (most probable) analysis presented on the prior pages, demand for lot sales have been lowered to estimate the minimum demand required to make the development feasible and produce an investment value equal to the estimated $16,000 per acre land value concluded on other sites in close proximately to the subject as of 1996. In the minimum lot sales analysis all of the same assumptions from the most probable analysis are used, except for the rate of lot sales, timing of the phases and the life of the project. The slower rate of sales require the lots sales to continue further into the future and suggest that the future phases of streets of the development would be constructed at a slower rate compatible with the adjusted rate of sales.

On the following three pages are tables for Lot Sales & Revenue, Summary of Cash Flows and Conclusions. The table on the following page shows the slower rate of lot sales used. Once the lot sales were lowered by six less lot sales per quarter, the "break even" was located where the investment value equals the original estimated land value of $16,000 per acre as seen on the last page of tables. The total sellout is now estimated to take nearly 14 years once the first phase of streets are installed, while the previous analysis indicated less than 10 years to sellout all of the lots. The average annual rate of lot sales required to make the project feasible is 54 lots, which is significantly lower than the 94 lots concluded in the most probable analysis presented earlier in this document. This is also well below Robert Charles Lesser & Co.'s estimates of 76 lots per year for the subject property in an analysis prepared in 1994. It is also less than the 84 lots per year historically achieved by golf course communities in the New Orleans area. The market need for the project is clearly evident. Not even five lot sales per month are needed for this project to be financially feasible.

This is only possible because the land owner would contribute 200 acres for public use as a golf course. In return, public funds would be used to construct the course which enhances the lot prices in the community. These two land uses are only possible at such modest lot prices and low golf course fees when they are combined in the manner proposed for the Estelle Plantation property.

Lots Sales & Revenue

	Culmative Lot Sales			Lot Sales		Lot Sales Prices		Revenue From Sales	
Quarter	Golf Lot Sales To Date	Non Golf Lot Sales To Date	Total Lot Sales To Date	Golf Lot Sales Quarter	Non Golf Lot Sales Quarter	Golf Lot Prices	Non Golf Lot Prices	Golf Lot Revenue	Non Golf Lot Revenue
0	0	0	0	0		0	0	0	0
1	0	0	0	0		0	0	0	0
2	0	0	0	0		0	0	0	0
3	0	0	0	0		0	0	0	0
4	0	0	0	0		0	0	0	0
5	0	0	0	0		0	0	0	0
6	0	0	0	0		0	0	0	0
7	12	25	37	12	25	$55,000	$45,000	$660,000	$1,125,000
8	15	34	49	3	9	$55,688	$45,563	$167,063	$410,063
9	18	43	61	3	9	$56,384	$46,132	$169,151	$415,188
10	21	52	73	3	9	$57,088	$46,709	$171,265	$420,378
11	24	61	85	3	9	$57,802	$47,293	$173,406	$425,633
12	27	70	97	3	9	$58,525	$47,884	$175,574	$430,953
13	30	79	109	3	9	$59,256	$48,482	$177,768	$436,340
14	35	90	125	5	11	$59,997	$49,088	$299,984	$539,971
15	40	101	141	5	11	$60,747	$49,702	$303,734	$546,721
16	45	112	157	5	11	$61,506	$50,323	$307,530	$553,555
17	50	123	173	5	11	$62,275	$50,952	$311,374	$560,474
18	55	134	189	5	11	$63,053	$51,589	$315,267	$567,480
19	60	145	205	5	11	$63,841	$52,234	$319,207	$574,573
20	65	156	221	5	11	$64,640	$52,887	$323,198	$581,756
21	70	167	237	5	11	$65,448	$53,548	$327,238	$589,028
22	75	178	253	5	11	$66,266	$54,217	$331,328	$596,390
23	81	190	271	6	12	$67,094	$54,895	$402,564	$658,740
24	87	202	289	6	12	$67,933	$55,581	$407,596	$666,975
25	93	214	307	6	12	$68,782	$56,276	$412,691	$675,312
26	99	226	325	6	12	$69,642	$56,979	$417,849	$683,753
27	105	238	343	6	12	$70,512	$57,692	$423,072	$692,300
28	111	250	361	6	12	$71,393	$58,413	$428,361	$700,954
29	117	262	379	6	12	$72,286	$59,143	$433,715	$709,716
30	123	274	397	6	12	$73,189	$59,882	$439,137	$718,587
31	129	286	415	6	12	$74,104	$60,631	$444,626	$727,570
32	135	298	433	6	12	$75,031	$61,389	$450,184	$736,664
33	141	310	451	6	12	$75,968	$62,156	$455,811	$745,872
34	150	322	472	9	12	$76,918	$62,933	$692,263	$755,196
35	159	334	493	9	12	$77,880	$63,720	$700,916	$764,636
36	168	346	514	9	12	$78,853	$64,516	$709,678	$774,194
37	177	358	535	9	12	$79,839	$65,323	$718,549	$783,871
38	186	359	545	9	1	$80,837	$66,139	$727,530	$66,139
39	195	359	554	9	0	$81,847	$66,966	$736,625	$0
40	204	359	563	9	0	$82,870	$67,803	$745,832	$0
41	213	359	572	9	0	$83,906	$68,650	$755,155	$0
42	222	359	581	9	0	$84,955	$69,509	$764,595	$0
43	231	359	590	9	0	$86,017	$70,377	$774,152	$0
44	240	359	599	9	0	$87,092	$71,257	$783,829	$0
45	249	359	608	9	0	$88,181	$72,148	$793,627	$0
46	258	359	617	9	0	$89,283	$73,050	$803,547	$0
47	267	359	626	9	0	$90,399	$73,963	$813,592	$0
48	276	359	635	9	0	$91,529	$74,887	$823,762	$0
49	285	359	644	9	0	$92,673	$75,824	$834,059	$0
50	294	359	653	9	0	$93,832	$76,771	$844,484	$0
51	303	359	662	9	0	$95,004	$77,731	$855,040	$0
52	312	359	671	9	0	$96,192	$78,703	$865,728	$0
53	321	359	680	9	0	$97,394	$79,686	$876,550	$0
54	330	359	689	9	0	$98,612	$80,682	$887,507	$0
55	339	359	698	9	0	$99,845	$81,691	$898,601	$0
56	348	359	707	9	0	$101,093	$82,712	$909,833	$0
57	357	359	716	9	0	$102,356	$83,746	$921,206	$0
58	366	359	725	9	0	$103,636	$84,793	$932,721	$0
59	375	359	734	9	0	$104,931	$85,853	$944,380	$0
60	384	359	743	9	0	$106,243	$86,926	$956,185	$0
61	389	359	748	5	0	$107,571	$88,012	$537,854	$0

Average Quarter Absorption By Lot Type	7.1	6.5
Average Annual Absorption By Lot Type	28.3	26.1
Average Annual Absorption For Entire Community		54.4

Summary of Cash Flows

Quarter	*Revenue* Total Lot Sales Revenue	*Expenses* Development Costs*	Selling & Mkting	Dev. Fee	Property Taxes	Overhead	Total Exps.	Net Income To Land	*Debt Service* Interest Pmts.	Principal Pmts.	*Return On Investment* Cash Flow To Equity	Cumulative Cash Flow To Equity
0	$0	0	0	0	0	0	0	0	0	0	(4,848,000)	(4,848,000)
1	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,003,297)
2	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,158,593)
3	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,313,890)
4	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,469,187)
5	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,624,484)
6	$0	146,570	0	0	8,726	0	155,297	(155,297)	0	0	(155,297)	(5,779,780)
7	$1,785,000	0	89,250	178,500	8,308	178,500	454,558	1,330,442	45,153	347,494	937,796	(4,841,984)
8	$577,125	0	28,856	57,713	8,203	57,713	152,484	424,641	36,465	112,701	275,475	(4,566,509)
9	$584,339	0	29,217	58,434	8,098	58,434	154,183	430,156	33,648	112,701	283,808	(4,282,701)
10	$591,643	0	29,582	59,164	7,993	59,164	155,904	435,739	30,830	112,701	292,208	(3,990,493)
11	$599,039	0	29,952	59,904	7,889	59,904	157,648	441,390	28,013	112,701	300,677	(3,689,816)
12	$606,527	920,440	30,326	60,653	7,784	60,653	1,079,856	(473,329)	25,195	112,701	(611,225)	(4,301,040)
13	$614,108	920,440	30,705	61,411	7,679	61,411	1,081,646	(467,538)	22,378	112,701	(602,616)	(4,903,656)
14	$839,955	920,440	41,998	83,995	7,505	83,995	1,137,933	(297,979)	19,560	150,268	(467,806)	(5,371,462)
15	$850,454	0	42,523	85,045	7,330	85,045	219,944	630,511	15,803	150,268	464,440	(4,907,023)
16	$861,085	0	43,054	86,108	7,156	86,108	222,427	638,658	12,047	150,268	476,344	(4,430,679)
17	$871,849	0	43,592	87,185	6,981	87,185	224,943	646,905	8,290	150,268	488,348	(3,942,331)
18	$882,747	0	44,137	88,275	6,807	88,275	227,493	655,253	4,533	150,268	500,453	(3,441,879)
19	$893,781	0	44,689	89,378	6,632	89,378	230,077	663,704	777	31,842	631,085	(2,810,793)
20	$904,953	975,666	45,248	90,495	6,458	90,495	1,208,362	(303,409)	0	0	(303,409)	(3,114,202)
21	$916,265	975,666	45,813	91,627	6,283	91,627	1,211,016	(294,751)	0	0	(294,751)	(3,408,953)
22	$927,718	975,666	46,386	92,772	6,108	92,772	1,213,704	(285,986)	0	0	(285,986)	(3,694,939)
23	$1,061,304	0	53,065	106,130	5,899	106,130	271,225	790,079	0	0	790,079	(2,904,860)
24	$1,074,570	0	53,729	107,457	5,690	107,457	274,332	800,238	0	0	800,238	(2,104,622)
25	$1,088,002	0	54,400	108,800	5,480	108,800	277,481	810,522	0	0	810,522	(1,294,100)
26	$1,101,602	1,004,936	55,080	110,160	5,271	110,160	1,285,608	(184,005)	0	0	(184,005)	(1,478,106)
27	$1,115,372	1,004,936	55,769	111,537	5,061	111,537	1,288,841	(173,468)	0	0	(173,468)	(1,651,574)
28	$1,129,315	1,004,936	56,466	112,931	4,852	112,931	1,292,117	(162,802)	0	0	(162,802)	(1,814,376)
29	$1,143,431	0	57,172	114,343	4,642	114,343	290,500	852,931	0	0	852,931	(961,446)
30	$1,157,724	0	57,886	115,772	4,433	115,772	293,864	863,860	0	0	863,860	(97,586)
31	$1,172,195	0	58,610	117,220	4,224	117,220	297,272	874,923	0	0	874,923	777,337
32	$1,186,848	0	59,342	118,685	4,014	118,685	300,726	886,122	0	0	886,122	1,663,459
33	$1,201,683	1,035,084	60,084	120,168	3,805	120,168	1,339,310	(137,627)	0	0	(137,627)	1,525,832
34	$1,447,459	1,035,084	72,373	144,746	3,491	144,746	1,400,440	47,019	0	0	47,019	1,572,852
35	$1,465,552	1,035,084	73,278	146,555	3,176	146,555	1,404,649	60,903	0	0	60,903	1,633,755
36	$1,483,871	0	74,194	148,387	2,862	148,387	373,830	1,110,041	0	0	1,110,041	2,743,796
37	$1,502,420	0	75,121	150,242	2,548	150,242	378,153	1,124,267	0	0	1,124,267	3,868,063
38	$793,670	0	39,683	79,367	2,234	79,367	200,651	593,018	0	0	593,018	4,461,081
39	$736,625	0	36,831	73,662	1,920	73,662	186,076	550,549	0	0	550,549	5,011,630
40	$745,832	0	37,292	74,583	1,606	74,583	188,064	557,769	0	0	557,769	5,569,398
41	$755,155	0	37,758	75,516	1,292	75,516	190,080	565,075	0	0	565,075	6,134,473
42	$764,595	0	38,230	76,459	977	76,459	192,126	572,469	0	0	572,469	6,706,942
43	$774,152	1,049,106	38,708	77,415	663	77,415	1,243,307	(469,155)	0	0	(469,155)	6,237,787
44	$783,829	1,049,106	39,191	78,383	349	78,383	1,245,412	(461,583)	0	0	(461,583)	5,776,204
45	$793,627	1,049,106	39,681	79,363	35	79,363	1,247,548	(453,921)	0	0	(453,921)	5,322,283
46	$803,547	0	40,177	80,355	(279)	80,355	200,608	602,940	0	0	602,940	5,925,223
47	$813,592	0	40,680	81,359	(593)	81,359	202,805	610,787	0	0	610,787	6,536,010
48	$823,762	0	41,188	82,376	(908)	82,376	205,033	618,729	0	0	618,729	7,154,739
49	$834,059	0	41,703	83,406	(1,222)	83,406	207,293	626,766	0	0	626,766	7,781,504
50	$844,484	0	42,224	84,448	(1,536)	84,448	209,585	634,899	0	0	634,899	8,416,403
51	$855,040	0	42,752	85,504	(1,850)	85,504	211,910	643,130	0	0	643,130	9,059,534
52	$865,728	0	43,286	86,573	(2,164)	86,573	214,268	651,460	0	0	651,460	9,710,994
53	$876,550	0	43,827	87,655	(2,478)	87,655	216,659	659,891	0	0	659,891	10,370,885
54	$887,507	0	44,375	88,751	(2,792)	88,751	219,084	668,423	0	0	668,423	11,039,307
55	$898,601	0	44,930	89,860	(3,107)	89,860	221,544	677,057	0	0	677,057	11,716,365
56	$909,833	0	45,492	90,983	(3,421)	90,983	224,038	685,796	0	0	685,796	12,402,160
57	$921,206	0	46,060	92,121	(3,735)	92,121	226,567	694,639	0	0	694,639	13,096,800
58	$932,721	0	46,636	93,272	(4,049)	93,272	229,131	703,590	0	0	703,590	13,800,389
59	$944,380	0	47,219	94,438	(4,363)	94,438	231,732	712,648	0	0	712,648	14,513,038
60	$956,185	0	47,809	95,618	(4,677)	95,618	234,369	721,816	0	0	721,816	15,234,854
61	$537,854	0	26,893	53,785	(4,852)	53,785	129,612	408,242	0	0	408,242	15,643,096
Total	$51,490,472	$15,835,121	$2,574,524	$5,149,047	$202,069	$5,149,047	$28,909,808	$22,580,664	$282,691	$1,806,877	$15,643,096	

* Development Cost Funded By Equity Only

Conclusions Of Analysis

Cumulative Equity Cashflow	$15,643,096
Cumulative Subdivision Costs	$38,280,121
Authorized Loan	$1,806,100
Equity Contribution	($4,848,000)
Gross Sellout	$51,490,472
Years To Sellout After Initial Streets	13.75

Investment Value of Land Equity 15% Before Tax Rate of Return	$4,960,000
Investment Value Per Acre	$16,370
Assumed Initial Land Value	$16,000

ADDENDUM A

STREET COST BY MARSHALL VALUATION

Street Cost Based On Marshall Valuation Service

Segregated Street Costs:

Unit:	Unit Cost:
Grading & Fill	$10.80
4' Rock Base	$16.40
Paving 4" Asphalt Concrete	$46.00
Concrete Curb 6"	$16.40
Cross Gutter	$1.95
Sidewalk	$20.00
Aprons	$6.55
Sewer Main 8"	$19.60
Sewer Laterals 4"	$9.10
Sewer Clean outs	$14.50
Manholes	$3.70
Water Main 6"	$18.85
Water Lateral	$8.35
Meters	$6.00
Fire Hydrants	$6.50
Gas Main	$7.60
Gas Lateral	$5.60
Underground Electric	$13.25
Electric Lateral	$8.40
Telephone Underground	$5.80
Streetlights	$9.50
Gross Costs 9/93	$254.85
Minus Gas Main Lateral Supplied by Gas Company	($12.00)
Street Cost Per Linear Foot	242.85

Source: Marshall Valuation Service, Marshall and Swift Co., September 1993

APPENDIX R

REAL PROPERTY ASSOCIATES & COMPANY
MAY 16, 1996 GOLFING AND MARKET VALUE ANALYSIS

RPA/ Real Property Associates & Company

WADE R RAGAS, Ph.D.
President

Financial Analysis

Market Feasibility

Investment Counseling

Property Valuation

May 16, 1996

Mr. Tac Carrere
16th Floor, Heritage Center
111 Veterans Blvd., Suite 1600
Metairie, Louisiana 70005

Dear Mr. Carrere:

Enclosed are a set of factual information which may be useful in your pending 404 permit application with the Army Corps of Engineers. The initial information includes:

1. Historic demand and pricing for golf course communities in the New Orleans area.
2. Recent lot absorption rates for 11 subdivisions near the Estelle Plantation parcel.
3. A history of appraiser opinions of market value and highest and best use for parcels near the Estelle parcel.
4. Current golf course fees at public courses vs. private course fees in the New Orleans area.

Historic Demand

The historic lot absorption rate from 1970 to 1985 was a very consistent 85 lots per year per golf course community. I have actually searched the public record and plotted the location of every lot sale in six communities over this time period--a total of over 4500 lot sales. These sales are summarized by table in the report,but can be factually supported by computer files. Historically there were five golf course communities each year under development with on going sales programs from 1975 to 1985. Today there are only two golf course communities offering newly developed lots, both of which are oriented toward the most affluent households in the market (a very small market segment). Instead the traditional above average to average income market served by Chateau Estates, Ormond, Lake Timberlane, Country Club Estates, Eden Isles and Eastover are not presently being served. The lack of any vacant parcels of even 100 acres zoned for residential use in East Jefferson precludes any future golf course development in the northern portion of Jefferson Parish.

The recovery of the oil and gas industry along the Gulf coast due to 3D seismic technological advances and directional drilling will enhance employment in the southern portion of Jefferson (West Jefferson). While a return to the rapid job growth of the 1975-1985 period may not occur it is likely much stronger employment growth will occur than in 1997-2000 than from 1991 to 1994. I have not prepared a forecast of

employment growth however existing published forecast by the Univerisity of New Orleans Division of Business and Economic Research indicate relatively slow growth in employment for 1996 followed by stronger employment gains in 1997. These expectations are consistent with the large expansions in exploration budgets of major oil firms for projects in the Gulf of Mexico. It is also consistent with surge in construction of deep water drilling rigs to support exploration in water depths of 3,000 feet.

Golf Course Lot Prices

Lot prices on the golf course are usually 20% to 40% higher than lots not on the course. The lots not on the course sell for prices similar to non-golf course communities appealing to above average income buyers. In todays market this would be $42,000 to $50,000 lots for locations not on a golf course based on actual sales of lots in better quality subdivisions. Golf course lot prices of $55,000 would not be high in a market with luxery house purchasers in Old Metairie are tearing down $180,000 houses for the lot or where golf course lots in English Turn sell for more than $100,000. Typically, two-thirds of the lot sales are for the lots not on the course and one-third or so are for golf course lots.

Actual Lot Absorption

The recent lot absorption rates on the westbank of Jefferson, Orleans and Plaquemines parishes have been 3-4 lot sales per development per month. There is no large scale inventory of vacant, unsold lots in any of these developments. The westbank market as a whole, excluding English Turn, has been absorbing between 35 and 40 lots per month for the past two years. Most of these 11 subdivisions are sold out with five currently selling lots. A lot absorption rate for lots not on a golf course of 4 lots per month would be consistent with current market conditions. Sales of golf course lots would be in addition to these lots since they draw from demand that is now buying at English Turn or Oak Harbor or Old Metairie or the Jefferson Lakefront or Mandeville. I will analyze the lot sales activity at Lake Timberlane and Stonebridge but have not done so in the short time period available since I was asked to comment (under two weeks).

Non-Wetland Parcels Near the Subject

The wetland parcel estimates prepared by the U.S. Army Corp of Engineers for the westbank of Jefferson, Orleans and Plaquemines are included herein. They show under 650 acres of residentially zoned land available in the Barataria Corridor as of 1991 with a non-wetland status. I have reviewed their maps and parcel locations. In my opinion there is not another site with adequate land area, location, or egress which can be assembled for a golf course community on the westbank of Orleans or Jefferson Parishes within the identified non-wetland parcels.

Highest and Best Use Opinions of Appraisers for Similar Parcels

I have reviewed the appraisal opinions of seven other MAI appriasers of parcels they analyized within three miles of the subject between 1979 and 1996. Uniformly they found parcels within the hurricane protection levee to have a highest and best use for residential development (either immediately or in the near future). In several instances detailed discounted cash flow studies were prepared which showed development with current (1996) cost to be feasible. These appraisals are identified within this report but copies of all of them is too extensive a document to submit. All of the reports have been prepared for either private owners for use in court or for one of two public agencies (National Park Service or West Jefferson Levee District). Their conclusions today are similar to the U.S. Army Corps of Engineers conclusion in the Environmental Impact statement for the Westbank Hurricane Protection Levee (pp.5-15) from 1984:

> *"Approximately 3,640 acres would be enclosed, the largest area of any of the alternatives. This would induce extensive development throughout areas currently classified as wetlands. The Marrero-Estelle corridor has been a highly desirable development area because of its proximity to major employment and activity centers in the New Orleans SMSA. There is a need for moderately priced land to provide housing for low to middle-income buyers and renters. There are few other such areas available in the area."*

Golf Course Fees

A review of current golf course fees is also presented although I are still verifying some of those fees. Green and cart fees for public course tend to be $35 or so at public courses depending on the quality of the course. Private courses, if they allow non-members to play, tend to have green fee and cart rentals which total $60 or more per round played. There are no municipal golf courses in Jefferson Parish. By national standards it is extraordinary for a county with a population of over 450,000 perons to not have any municipal golf courses. I have done studies of golf course demand in the past in Jefferson, but have not prepared a study of demand at this time for the Estelle course. I would expect a study grounded on factual market information to find a substantial and adequate demand exists for a municipal golf course in Jefferson Parish with more affordable green fees for the public which did not require an additional country club membership fee in order to be allowed to play.

I hope that this factual information proves to be useful

Sincerely,

Wade R. Ragas, PhD, MAI

WRR/ymr

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SUMMARY OF CREDENTIALS
Wade R. Ragas PhD, MAI

Education

Doctorate in Business Administration (Real Estate and Urban Analysis) from the Ohio State University, 1976
Masters in Business Administration, University of New Orleans, 1971
Bachelor of Arts in Economics, University of New Orleans, 1969

Professional Certifications or Honors

Endowed Research Professorship in Real Estate Finance, UNO, 1991
Senior Residential Appraiser, 1984; Senior Real Estate Analyst, 1990 Member Appraisal Institute(MAI), 1991, The Appraisal Institute
Weimer Post Doctoral Fellow, Homer Hoyt Institute, 1991-92
Certified General Appraiser, Louisiana 1990 #0043
Research Fellow, Texas A&M Real Estate Center, 1993

Professional Associations

American Bar Association Anti-Trust Section (Associate)
Society of Office and Industrial Realtors, Academic Associate
Appraisal Institute, SRA, SREA, & MAI
American Real Estate and Urban Economics Association

Employment Summary

Endowed Research Professor in Finance, 1991-current
Director of Real Estate Market Data Center, 1986-current
Full Professor of Finance, University of New Orleans, 1987-current
Doctoral Research Fellow, Ohio State University, 1973-1975
Assistant Vice-President, Pringle-Associated Mortgage Corporation, 1972-1973 (mortgage and construction lending)
Assistant Vice-President, Smolkin-Siegel Corporation, 1971-1972 (national real estate market research)

Awards

Outstanding Finance Doctoral Student, Ohio State University, 1975
Weimer Fellow, 1992 (National, one of 50 since 1983)
UNO Service Award, 1971
Veterans Administration Certificate of Merit

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SUMMARY OF CREDENTIALS (Continued)
Wade R. Ragas PhD, MAI

Publication Summary

Applied Residential Property Valuation, Society of Real Estate Appraisers, 1981, revised 1985 (required nationally for SRA designation from 1982 to 1991)
New Orleans Real Estate Market Analysis, University of New Orleans, 1978-1995, 23 volumes (semi-annual 100 page monograph)
Real Estate Sale-Leaseback, Soc. of Indust. & Office Realtors, 1993

Articles in Land Economics, Appraisal Journal, Real Estate Appraiser and Analyst, Journal of Real Estate Finance and Economics, Real Estate Review, Journal of Urban Land, Journal of Refugee Resettlement, Economic Development Quarterly, Environmental Watch, Professional Report of the Society of Industrial and Office Realtors, Louisiana Business Survey, Journal of the Texas Real Estate Center (Tierra Grande), Journal of Real Estate Research, Review of Financial Economics, Technical Report of Texas Real Estate Center (approximately 32 articles 1971-1995)

Papers presented at national meetings: American Real Estate and Urban Economics Association, Southern Economics Association, Eastern Finance Association, North American Economics and Finance Association, Associated Catholic Charities, National Conference on Social Welfare, Weimer School of Homer Hoyt Institute, Western Regional Science Association.

Expert Witness

Federal District Court: Anti-Trust, Valuation, S&L Board of Director Responsibilities
Louisiana Civil Courts: Valuation, Eminent Domain, Earnings Loss
U.S. Senate Select Committee on Immigration

Reviewer

Irwin Books AIREA Dryden Press Wiley, Inc.
Question contributor and reviewer
Education Testing Service ASI, Inc.
Ad hoc reviewer, Journal of the American Real Estate and Urban Economics Association, and Economic Development Quarterly, Journal of Real Estate Research Member, board of reviewers, Review of Financial Economics, Professional Report of the Society of Industrial and Office Realtors

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SUMMARY OF CREDENTIALS (Continued)
Wade R. Ragas PhD, MAI

Education and Instruction Experience

Undergraduate, graduate, and doctoral instruction in real estate finance, investments, site and market feasibility analysis, and real estate valuation.

Doctoral course instruction in real estate finance and chairperson of two dissertations

SREA Courses 102 & 101 (Residential Property Valuation), national administrative instructor, instructed at 17 sites around the nation 1978-1991

SREA Course 201 instructor (Income Property Valuation), approved national administrative instructor, two sites nationally

Appraisal Institute approved instructor equivalent Residential and Commercial Courses (210 and 310)

Author and instructor for short courses on Condominiums, Energy Efficient Housing, Residential Valuation, Owner Financing, Wetlands, Loan Officer and Real Estate Valuation, Appraisal, Louisiana and Gulf Coast Real Estate Markets offered statewide throughout Louisiana. National Outstanding Seminar award of the National Assoc. of Realtors Education Foundation in 1993 for Wetlands Seminar. Numerous other seminars designed and taught to local audiences.

Member, Academic Liaison Committee of American Institute of Real Estate Appraisers 1983-1985 (national)

SREA committee on recertification, national, 1988-89
Author, SREA Louisiana certification materials, 1991

Appraisal Foundation Qualification Board task-force on appraisal examination content (national); task force on review of course materials, 1989-1990 (national)

Residential Continuing Education and Seminars, Chairperson (national) Appraisal Institute (1990-91)

Residential Education Board, (national), Appraisal Institute, 1990-1991.

Contractor to Appraisal Qualifications Board (national) to advise on process for reviewing and evaluating state certification exams, 1990

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Education and Instruction Experience (continued)

Research Committee (national), Society of Industrial and Office Realtors (1991-1994)

Board of Directors and Civic Activities

Mutual Savings and Loan Board of Directors, Metairie, La. 1984-current.
Rummel High School Development Committee and Strategic Planning Committee
University of New Orleans Research Park Development Committee and Chair of College of Business Bldg. Committee ($15 million project)
Historic Restorations Inc. Advisory Board (developer of apartments and hotels)
New Orleans Apartment Assoc. (1994 -current)
Advisor to Will Woods Foundation and Eucharistic Ministers of St. Dominic
Faculty Secretary, Omicron Delta Kappa, UNO Chapter (National Leadership Honorary Society) 20 years
Numerous University of New Orleans Committees

Valuation Assignments

Wide range of property types including office buildings, subdivisions, hotels, Miss. River batture, golf courses, vacant tracts and mixed use developments, manufacturing facilities, trailer parks, multifamily housing, condominiums, timeshares, houses, warehouses. Assignments have included opinions of market value, market feasibility analysis, reviewer of appraisals and investment analyses. Clients include law firms, domestic and foreign commercial banks, savings and loans, RTC, FDIC, Gulf Oil, Purina Mills, Southern Pacific Railroad and various property owners.

Expert witness for FDIC and RTC for large commercial loan litigation in ten states from 1989 to 1995 covering over $500 million in loans (five groups of litigation).

Expert witness on valuations, geographic market analysis, S&L Board of Director responsibilities, going concern business valuation

Market analyses for residential and multifamily mortgage backed bonds totalling over $400 million (six issues).

Valuation Experience: 15 years

SUMMARY OF CREDENTIALS (Continued)
Wade R. Ragas PhD, MAI

Typical Appraisal Assignments in the past two years:

Large Tracts of Land for Mixed Use Development: St.Tammany (2), Jefferson (4)
Neighborhood Externality Study covering 900 houses, Jefferson
Batture Land Sites: Jefferson, Orleans, Plaquemines (oil terminal)
Market study for Jeff. Home Mortgage Authority
Commercial lots
1840 plantation and 13 modern houses
Condominium conversion in French Quarter
Three building apartment complex
Industrial Plant in W. Baton Rouge
Reviews of 12 commercial loans and appraisals
Earnings loss of an individual

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CERTIFICATION

I certify that, to the best of my knowledge and belief, unless as otherwise noted in the appraisal report:

- The statements of fact contained in this report are true and correct.
- The reported analysis, opinions, and conclusion are limited only by the reported assumptions and limiting conditions, and are my personal unbiased professional analysis, opinions and conclusions.
- I have no present or prospective interest in the property that is the subject of this appraisal report and I have no personal interest or bias with respect to the parties involved.
- My compensation is not contingent on an action or event resulting from the analysis, opinions, or conclusions in or the use of, this report.
- I am currently certified under the continuing education program of the Appraisal Institute.

Wade R. Ragas, MAI, PhD

Louisiana General Certified
Appraiser No. 0043

ASSUMPTIONS AND LIMITING CONDITIONS

This report is subject to the following assumptions and limiting conditions (imposed by the terms of my assignment or by the undersigned) affecting the analyses, opinions and conclusions contained in this report.

1. No responsibility is here assumed for any matters which are legal or political, social, or economic changed conditions which could have an effect on real estate values which changes take place after the effective date of the opinion.

2. To the best of my knowledge and belief the statements of fact contained in this report, upon which the analyses, opinions and conclusions expressed herein are based, are true and correct.

3. The Analyst is not required to give testimony or appear in court because of having issued this report with reference to the property in question unless arrangements have previously been made therefore.

5. That no opinion as to title is rendered.

HISTORIC GOLF COMMUNITY ANALYSIS

It is difficult to analyze the existing level of demand for golf course community lots in the New Orleans area without some historic perspective. I have prepared a 12 year history from 1974 to 1986 which documents "normal" demand conditions when both employment and population were growing in the New Orleans area. From 1987 to 1990 population declined in Orleans and Jefferson, which led to a marked reduction in demand for golf course lots. Recovery in lot demand began in 1990 with a 5% rise in raw land values for parcels suitable for development occurring in the Barataria Corridor. This increase in land values can be documented (if necessary) from actual market transactions.

From 1992 to 1994 the inventory of finished lots in developer or lender hands was cleared from the market. In St. Tammany, the need for new lots became evident in 1992 and a year or so later in Jefferson. Starting in 1993, new streets began to be created for single family subdivisions on the Westbank of Jefferson and Orleans Parishes.

Golf course lots at English Turn began to rapidly sell in 1993. New phases have begun annually since 1993 at English Turn. A large scale program of new street construction for English Turn is in the final design stages at Krebs, LaSalle and LeMieux (engineers) at this time. Enclosed are recent announcements of lot availability at English Turn. (See Addendum A.)

The Eastover golf community is now seeking a buyer to resume development around the golf course. This site in Eastern New Orleans has been in the midst of the largest supply of finished lots in the New Orleans market. Even here efforts to start new development are underway. (See Addendum A.)

Oak Harbor in Slidell was delayed from lot sales and street development from 1988 to 1994. The sale of the west side of the property to several developers in 1994 has allowed construction to resume. A review of real estate transfers shows a very strong housing market with luxury oriented market demand.

Typically, the New Orleans area could simultaneously support five golf course communities with differing geographic and market appeals. Today only two golf communities are actively being marketed - English Turn and Oak Harbor. Although Jefferson Parish has the strongest economy in the region and the largest job growth in the New Orleans area, it has no large scale residential community currently under development.

A severe land shortage in East Jefferson precludes large scale development in the future. West Jefferson has almost no parcels of even 100 acres suitably located for development which do not require a 404 wetlands permit.

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Historically, the golf community market could absorb 435 lots per year or about 87 per golf community. When there are only three golf communities competing instead of five, a much smaller total market of 255 or so lots would be needed for each one to average 85 lot sales per year or 21 per quarter. The breakeven sales volume for a golf course community is much lower than 85 lot sales per year. Depending on development costs and the lack of cost for the golf course to the developer, it is my belief that an adequate market rate of return for a developer can be attained between 50 and 60 lot sales per year.

First Time Lot Sales

Lot sales within six golf course oriented residential developments were analyzed between 1974 and 1986. Lot sales by the original developer of the golf course community to individuals or builders were traced in the public records using a data service called New Orleans Real Estate Transfers. This "legal news" has proven to be a generally reliable listing of the publicly recorded sales. It provides the parcel lot and square, street address, buyer, seller, recordation citation, sales price and lot dimensions.

The first time lot sales are indicative of the absorption by the market place comprised of individual buyers from the development. Not included on these tables are acreage sales to other developers who would themselves subdivide, pave, and sell individual lots within the larger country club development.

Typically, only a few lots are recorded in the first few months of sales during the first year of a new project. Most of the developers experience at some point a two or three year surge in lot sales during which they sold 57% to 70% of all lots in the current phase of the development.

The table below summarizes the sales activity by year for the six developments analyzed. A total of 4,655 lots were sold by the developers to individual buyers between 1974 and 1986. During the average year 438 lots were sold. The average golf course development sold about 84 lots per year - twenty-one lots on the course and sixty-three lots off the course.

However, there was substantial variability in the rate of lot sales. Chateau Estates and Ormond both achieved high rates of sales, in excess of 125 lots per year. Stonebridge achieved high rates of lot sales in 1981 and 1982 (over 223 lots per year). It was on the Westbank adjacent to the Barataria Corridor and the large job concentration at the Harvey Canal.

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Table One

COUNTRY CLUB LOT SALES VOLUME
OF FIRST TIME LOT SALES BY YEAR

	A Beau Chene	B Belle Terre	C Chateau Estates	Ormond	D Stone Bridge	E Willow Wood	F Total
1974	12		45			15	72
1975	65		293	24		8	420
1976	90	11	373	69		14	557
1977	51	98	145	46		17	357
1978	68	125	159	907		5	1261
1979	22	67	54	303		7	453
1980	17	29	47	74		3	170
1981	36	24	24	57	220	4	365
1982	109	15	12	19	226	11	392
1983	44	13		8	63	5	140
1984	41	34		55	39	27	198
1985	57	24		56	40	10	189
1986	42	26		20	14	6	108
Total	654	466	1163	1638	602	132	4655
Sales Surge	16.7	47.8%	57.3%	73.9%	70.2%	n.a.	53.2%
Average Number of Sales/ Year	50.3	42.4	130	136.5	100.3	10.2	434.8*
Years	13	11	9	12	6	13	10.7*

Typical Sales per Year per Project:

Golf View Lots = 21

Off the Course Lots = 63

Total Sales 84

* Omits Willow Wood

Source: New Orleans Real Estate Transfers tabulated by Real Property Assoc., Inc.

Table Two

SALES VOLUME OF LOTS ON THE GOLF COURSE
FIRST TIME LOT SALES BY YEAR

	Beau Chene	Belle Terre	Chateau Estates	Ormond	Stone Bridge	Willow Wood	Total
1974	8		21	0		10	39
1975	28		68	0		8	104
1976	27	8	51	0		14	100
1977	25	17	17	0		14	73
1978	34	37	9	164		5	249
1979	11	18	3	64		7	103
1980	6	0	2	10		3	21
1981	23	16	1	14	82	0	136
1982	84	9	1	3	96	1	194
1983	28	6		1	4	2	42
1984	15	6		13	2	1	38
1985	39	4		19	4	4	70
1986	26	9		5	1	2	43
Total	354	130	175	293	189	71	1212
Sales Surge	23.7%	28.5%	38.8%	77.8%	94.2%	19.7%	48.5%
Average Number of Sales	27.2	11.8	19.4	32.6	31.5	5.5	119.2
Years	13	11	9	9	6	13	10.17

Time Period	Average Rate of Lot Sales	Number of Active Projects	Sales per Project
1976 - 79	131	5	26
1980 - 82	117	5	23
1983 - 85	50	4	12
		Overall	21

Source: New Orleans Real Estate Transfers tabulated by Real Property Assoc., Inc.

Table Three

OFF THE COURSE LOTS SALES VOLUME OF FIRST TIME LOT SALES BY YEAR

	Beau Chene	Belle Terre	Chateau Estates	Ormond	Stone Bridge	Willow Wood	Total
1974	4		24	3		5	36
1975	37		225	24		0	286
1976	63	3	322	69		0	457
1977	26	81	128	46		3	284
1978	34	88	147	743		0	1012
1979	11	49	51	239		0	350
1980	11	29	45	64		0	149
1981	13	8	23	43	138	4	229
1982	25	6	11	16	130	10	198
1983	16	7		7	59	3	98
1984	26	28		42	37	26	160
1985	18	20		37	36	6	119
1986	16	17		15	13	4	68
Total	300	336	988	1348	403	61	3436
Percentage of all Sales	21.0%	40.8%	55.4%	72.9%	66.5%	47.4%	50.7%
Average Number of Sales	23.1	30.5	109.8	103.7	67.2	4.7	318
Years	13	11	9	13	6	13	10.8

Time Period	Average Rate of Lot Sales	Number of Active Projects	Sales per Project
1976 - 79	526	4	130
1980 - 82	192	5	36
1983 - 85	125	5	25
		Overall	63

Source: New Orleans Real Estate Transfers tabulated by Real Property Assoc., Inc.

Beau Chene maintained a steady but much slower rate of sales averaging 46 lots per year over a 15 year period. This upper income oriented development was over 28 miles from the employment concentrations of East Jefferson and over 35 miles from the New Orleans CBD. Very exclusive, upper income projects appear to achieve a long term steady demand rather than the sudden surge in demand for average income oriented housing. Somewhat less expensive, but still above average income golf communities had stronger overall demand prior to 1986.

Belle Terre was also about 15 miles from the New Orleans International Airport and 20 miles from Elmwood - both large areas of job concentration in East Jefferson. It was more than 25 miles from the New Orleans CBD. Belle Terre sold 78 lots per year between 1974 and 1978. This sales rate is deceptive. Simultaneously four other subdivisions were being marketed at Belle Terre which were not part of the golf course community. Just three of the five averaged 157 lots per year from 1974 to 1978.

Finally, Willow Wood was over 15 miles from the Harvey Canal, and its nearest source of employment concentration was Avondale Shipyards. The shipyard was dominated by blue collar, hourly employees who were unlikely to seek a golf course oriented housing development. The engineering and professional staff of this 6,000 person employer offered Willow Wood a potential market. These same workers were also about an equal distance from Stonebridge or Chateau Estates as from Willow Wood. It was accessible only through a two lane, unlighted road across a low lying wooded area. It never successfully appealed to the marketplace.

A golfing and country club housing development with good access to employment could reasonably expect to average at least 80 lot sales per year based on the historic sales rates of golf course communities during periods of economic expansion of the New Orleans area. There would be some years below this rate and some above. It would not be unusual to achieve a peak sales period at double this rate for several years. The actual average sales per year from 1976 to 1985 for the six active golf course communities were 21 golf view lots per year and 63 non golf view lots.

Historically, from 1974 to 1986 there had always been four or five golf oriented communities simultaneously marketing lots in the New Orleans area. This was a period of rising employment in the New Orleans market area. From 1986 to 1996 there were only two new golf communities in sales - English Turn and Oak Harbor. However, the final phase of Beau Chene was sold out during this period. Stonebridge golf course lots left unsold from the 1986-89 period were sold to a private developer who then resold all the remaining lots to end users. Eastover in New Orleans East decided not to construct the remainder of their golf course residential land and placed the remaining 79.87 acre parcel without finished lots for sale.

English Turn began offering Lake lots of .42 to .60 acres not on the golf course in May, 1995 for prices of $118,000 to $165,000 per lot. These lots have met with strong

market acceptance even though they lack golf course views. Only two golf courses were competing for new home buyers with newly developed lots as of April 1996 - English Turn and Oak Harbor - instead of the five projects historically in sales and development for this market. Acreage in Belle Terre with golf course frontage was sold in 1995 to a private owner by the RTC. However, no plans for developing this acreage have yet been publicly announced. Privately these owners are moving forward with plans to develop additional golf course lots, as well as other housing.

Golf Course Frontage Sites

Only a small part of the lots sold in a golfing oriented community have actual frontage on the golf course. The more successful communities (Chateau Estates and Ormond) created relatively few large sites with golf course frontage (under 20% of all lots). A similar percentage of lots (under 20%) were across the street from the course.

Together, under 40% of the lots were designed for truly upper-income housing. The majority of the sites in the typical golf course community were historically for above average income households seeking an environment superior to the typical single-family subdivision.

Beau Chene had fully half of its lots with golf course frontage and the remainder were across the street from the course lots. However, this community was oriented toward a more affluent group of buyers than either Ormond or Chateau Estates. The entire Beau Chene development sought only this small, very affluent market.

Belle Terre followed a similar strategy to Ormond and Chateau Estates, although a larger percentage of its lots had golf course frontage (27%). The overall pricing in Belle Terre was significantly less expensive than Chateau Estates or Ormond.

Acreage and Lot Sizes

The average lot square footage between 1974 and 1988 was 11,750 square feet. This is indicative of an 80 by 150 foot lot. The average lot is not indicative of the two distinct clusterings in lot sizes:

Estate lots in Beau Chene and Willow Wood of nearly 16,000 feet

Smaller, single family sites in Chateau Estates and Belle Terre of 5800 to 9600 feet

The larger sites offered a marketing advantage, but did not significantly alter the sales volume away from the two most centrally located properties - Chateau Estates and Ormond.

The same developer created Chateau Estates, Ormond, and Stonebridge. His third development, Stonebridge, had lots larger than Chateau Estates but smaller than Beau Chene or Ormond.

Comparing lots on the golf course to those not on the golf course also yields a fairly clear pattern.

The golf course lots are larger than non-golf course lots. The most successful development, Ormond, offered golf course sites averaging 15,150 sq. ft. or approximately 100'X 150' foot lots. These were one-third acre sites appropriate for houses larger than 3000 square feet of living area.

The non-golf course lots were still large at 12,000 square feet.

LOT PRICES

There was a pattern of rising average lot prices across all six golf/county club developments from 1976 to 1985. We will introduce data subsequently on lot sale prices in Stonebridge and Lake Timberlane today. However, it is useful to understand the historic pattern of golf community lot pricing. When Stonebridge opened in 1981, price appreciation no longer occurred at Willow Wood, a geographically inferior location. However, all five of the other major developments experienced rising prices from 1976 to 1985.

Although Chateau Estates and Ormond achieved more lot sales than Beau Chene, they experienced lower rates of price appreciation. In Beau Chene the average lot rose from $22,400 in 1976 to $65,400 in 1985, which is a 12.6% annual rate of increase.

Initially (1976), lots in Chateau Estates and Ormond were similar in price to Beau Chene - between $20,239 and $21,918. By 1985 both of these developments had average lot prices in the mid-$30,000 price range. Their compound rates of price appreciation from 1976 to 1985 were:

Chateau Estates	7.3%
Ormond	5.6

These are still very substantial rates of price appreciation. Belle Terre rose from $12,272 for the average lot in 1976 to $30,667 in 1985 - a 10.7% rate of appreciation. Stonebridge began lot sales in 1981 with an average price of $32,722.

Substantial variation in rates of price appreciation occurred among the six developments. Even though little price appreciation occurred in Willow Wood after 1981, the overall average annual rate of increase in price between 1976 and 1985 was still 7.1% per year. Willow Woods distant location from the market clearly has limited its market demand. It would not be a strong competitor for the lots in Estelle.

Golf course lots achieved higher sales prices and higher appreciation rates than lots without direct golf course egress. Lot appreciation rates of 7% commonly occurred and during periods of strong demand price increases of 10% per year were not unusual.

Table Four

COUNTRY CLUB COMMUNITIES
AVERAGE TRANSACTION PRICES BY YEAR

	Beau Chene	Belle Terre	Chateau Estates	Ormond	Stone Bridge	Willow Wood	Weighted Average
1974	$28,160		$22,020	$6,600		$10,550	$16,833
1975	$24,037		$20,544	$16,317		$14,322	$18,805
1976	$22,446	$12,272	$20,239	$21,198		$13,390	$17,909
1977	$25,153	$14,118	$31,452	$28,413		$19,955	$23,818
1978	$30,980	$16,789	$26,092	$19,394		$22,704	$23,192
1979	$41,324	$21,476	$33,087	$25,226		$25,470	$29,317
1980	$38,455	$21,635	$41,106	$27,197		$30,750	$31,829
1981	$42,756	$25,406	$39,402	$28,297	$32,722	$22,950	$31,922
1982	$51,669	$28,220	$32,800	$26,354	$31,962	$21,725	$32,122
1983	$51,129	$29,493	$56,800	$26,449	$51,328	$26,840	$40,340
1984	$57,518	$28,934	$40,000	$29,964	$37,003	$21,013	$35,739
1985	$65,447	$30,667	$38,167	$34,548	$35,647	$24,821	$38,216
1986	$70,730	$28,667	n.a.	$37,497	$34,767	$21,700	$35,117
Weighted Avg.	$45,450	$29,631	$32,235	$31,537	$47,092	$21,276	$30,415

Source: New Orleans Real Estate transfers, tabulated by Real Property Assoc., Inc.

Table Five

COUNTRY CLUB COMMUNITIES
GOLF VIEW LOT TRANSACTION PRICES BY YEAR

	Beau Chene	Belle Terre	Chateau Estates	Ormond	Stone Bridge	Willow Wood	Weighted Average
1974	$25,272		$28,699	$0		$11,391	$16,340
1975	$33,809		$28,042	$0		$14,322	$19,043
1976	$25,911	$12,625	$32,054	$0		$13,390	$20,995
1977	$28,948	$15,434	$49,263	$0		$20,385	$28,508
1978	$34,327	$18,407	$87,534	$26,630		$22,704	$37,920
1979	$48,327	$24,201	$54,733	$31,988		$26,078	$37,065
1980	$42,832	$0	$55,247	$25,805		$32,900	$39,196
1981	$48,350	$26,265	$73,880	$38,583	$40,041	$0	$45,424
1982	$54,642	$29,675	$0	$38,400	$36,760	$26,250	$37,145
1983	$59,644	$31,142	$70,000	$34,260	$36,625	$36,000	$44,612
1984	$70,456	$31,548	$39,500	$38,775	$23,875	$33,000	$39,526
1985	$70,247	$35,036	$0	$42,820	$34,800	$27,812	$42,143
1986	$75,046	$28,505	$0	$48,033	$45,000	$20,167	$43,350
Weighted Avg.	$51,505	$31,649	$51,895	$41,483	$47,169	$22,457	$36,092

Source: New Orleans Real Estate transfers, tabulated by Real Property Assoc., Inc.

Table Six

COUNTRY CLUB COMMUNITIES
OFF THE COURSE LOT TRANSACTION PRICES BY YEAR

	Beau Chene	Belle Terre	Chateau Estates	Ormond	Stone Bridge	Willow Wood	Weighted Average
1974	$33,937		$16,175	$6,600		$8;700	$16,353
1975	$16,771		$18,252	$16,317		$0	$12,835
1976	$20,833	$11,333	$18,373	$21,198		$0	$14,347
1977	$23,442	$13,842	$29,325	$28,413		$18,125	$22,629
1978	$27,921	$16,109	$22,405	$17,668		$0	$16,821
1979	$33,621	$20,475	$30,464	$24,281		$0	$25,768
1980	$32,685	$21,635	$38,063	$38,465		$0	$30,170
1981	$34,817	$23,689	$36,529	$26,458	$28,373	$22,950	$28,803
1982	$45,723	$26,036	$32,800	$24,959	$28,419	$20,820	$29,793
1983	$40,532	$28,080	$55,857	$24,338	$52,324	$20,733	$36,977
1984	$48,518	$28,374	$40,250	$27,632	$37,713	$20,600	$33,848
1985	$58,107	$29,793	$38,167	$31,424	$35,741	$22,257	$35,915
1986	$64,776	$28,768	$43,360	$35,876	$33,980	$22,275	$38,173
Weighted Avg.	$39,831	$28,815	$32,309	$30,946	$44,748	$15,432	$27,803

Source: New Orleans Real Estate transfers, tabulated by Real Property Assoc., Inc.

Golf course lots in Chateau Estates rose from $32,000 in 1976 to $73,880 in 1981. Similarly, in Beau Chene average lots selling for $25,911 in 1976 were selling for $70,247 by 1985. Doubling and tripling of sales prices in five to eight years produces extremely high annual rates of return.

PRICE APPRECIATION

The rate of price change is clearly not constant from year to year. An analysis of price rates of change broken into three year increments shows the unique pricing pattern from 1976 to 1985.

The average lot sales price rose 19.5% from 1976 to 1979 in the six golf course developments. This rate of growth moderated between 1979 and 1982 to a 4% rate of increase, followed by a resurgence in price increases from 1982 to 1985 of 9.6% per year.

After 1985, the oil and gas recession in Louisiana slowed the price growth rate to 3% per year. All of these rates of change are compound annual rates.

The nine years between 1976 and 1985 produced an overall compound rate of price appreciation of 9.5% per year.

When the sales are separated into those with golf course frontage and those lots without golf course frontage, the general pattern of price increase is unchanged.

However, golf course lots when viewed across all six communities grew more slowly in price, at 8% per year, than lots not on the golf course at 10.7% per year. Clearly, the amenity value of a golf course imparted even more price appreciation to the somewhat smaller, non-golf course fronting lots comprising the bulk of these developments.

The developers and investors proved to be quite rational in purchasing property in golf course communities.

Rate of Change in Average Lot Sales Prices Per Year
1976 - 1988

Time Period	All Lots
1976 - 79	19.5%
1979 - 82	4%
1982 - 85	9.6%
1976 - 85	9.5%

These were very substantial rates of price appreciation.

It is possible that average lot prices distort the price trend, since variations in the size of lots sold are commingled with pure price changes.

Lot prices per front foot are the most common unit of comparison for residential lots among appraisers in the New Orleans area. The sales price divided by the lot's front footage produces the observed prices per front foot.

After removing some of the variation due to changing lot size, even more pure price appreciation is evident. The average of all lots (see Table Thirty-two) grew by a compound annual rate of near 9.5% between 1976 and 1985.

The non-linear pattern of price increases continued to be evident. Extremely rapid price appreciation between 1976 and 1979 of 19.5% per year was followed by slower price growth from 1979 to 1982 of 4% per year. There was a resurgence of price appreciation from 1982 to 1985 of 9.6% per year.

The very large sample of lot sales (over 6,400 lots) spread across six golf communities ranging from moderate to upper-income market appeal increases the likelihood that this pattern was indicative of the market for golf course community lots.

Expected Price Appreciation

The past pattern of rapid price appreciation for all major competing developments should have been adequate to allow marketing plans based on at least 4% price appreciation per year from 1991 to 1993. From 1994 to 1995 an increase to 7% per year would be a reasonable expectation. As the project matured, higher rates of appreciation would be expected to be between 8% and 10% per year after 1995.

Table Seven

COUNTRY CLUB COMMUNITIES ALL LOTS
WEIGHTED PRICE PER FRONT FOOT
TRANSACTIONS BY YEAR

	Beau Chene	Belle Terre	Chateau Estates	Ormond	Stone Bridge	Willow Wood	Weighted Average
1974	$369		$267	$92		$99	$207
1975	$274		$263	$223		$150	$228
1976	$255	$143	$282	$237		$133	$210
1977	$269	$181	$388	$260		$201	$260
1978	$329	$226	$367	$236		$193	$270
1979	$475	$292	$424	$307		$293	$358
1980	$405	$296	$478	$342		$318	$368
1981	$509	$361	$470	$342	$358	$242	$380
1982	$533	$334	$364	$360	$356	$242	$402
1983	$567	$362	$734	$313	$518	$289	$464
1984	$619	$348	$472	$352	$441	$242	$412
1985	$685 $477	$395	$730	$393	$414	$245	
1986	$705 $468	$339	$669	$443	$419	$431	
Avg.	$493	$298	$454	$300	$418	$223	$377

1985 Simple Average $477

1985 Range Among 5 Majors $393 to $730

Source: New Orleans Real Estate Transfers and Real Property Assoc., Inc.

Table Eight

COUNTRY CLUB COMMUNITIES
WEIGHTED GOLF VIEW LOT PRICE PER FRONT FOOT
TRANSACTIONS BY YEAR

	Beau Chene	Belle Terre	Chateau Estates	Ormond	Stone Bridge	Willow Wood	Weighted Average
1974	$385		$305	$0		$107	$199
1975	$392		$306	$0		$150	$212
1976	$283	$144	$385	$0		$133	$236
1977	$311	$220	$388	$0		$207	$282
1978	$352	$253	$367	$256		$193	$284
1979	$502	$323	$424	$306		$308	$373
1980	$435	$ 0	$478	$337		$342	$398
1981	$568	$404	$470	$385	$401	$ 0	$446
1982	$556	$342	$364	$365	$386	$256	$454
1983	$637	$353	$734	$322	$416	$378	$473
1984	$747	$371	$472	$377	$313	$308	$431
1985	$727	$397	$730	$420	$442	$271	$597
1986	$739	$351	$669	$459	$563	$276	$571
Avg.	$550	$316	$609	$323	$420	$215	$411

1985 Simple Average Price Per Front Foot $509

1985 Range Among 5 Majors $397 to $727

Source: New Orleans Real Estate Transfers and Real Property Assoc., Inc.

Table Nine

COUNTRY CLUB COMMUNITIES
WEIGHTED OFF THE COURSE PRICE PER FRONT FOOT
TRANSACTIONS BY YEAR

	Beau Chene	Belle Terre	Chateau Estates	Ormond	Stone Bridge	Willow Wood	Weighted Average
1974	$337		$235	$92		$83	$187
1975	$186		$250	$223		$0	$165
1976	$242	$136	$266	$237		$0	$176
1977	$250	$174	$371	$260		$173	$246
1978	$308	$215	$331	$231		$0	$217
1979	$445	$281	$404	$307		$154	$318
1980	$365	$296	$458	$379		$200	$340
1981	$426	$275	$448	$334	$332	$242	$343
1982	$488	$323	$364	$352	$335	$239	$350
1983	$479	$370	$736	$310	$525	$230	$442
1984	$531	$342	$475	$347	$448	$240	$397
1985	$621	$395	$730	$385	$411	$222	$461
1986	$658	$333	$669	$440	$408	$242	$458
Avg.	$440	$285	$441	$300	$410	$162	$345

1985 Simple Average Price $461.00

1985 Range Among 5 Majors $385 to $621

Source: New Orleans Real Estate Transfers and Real Property Assoc., Inc.

Table Ten

RATE OF CHANGE IN AVERAGE PRICE PER FRONT FOOT PER YEAR COUNTRY CLUB COMMUNITIES 1976 - 1985

Time Period	All Lots	Golf Course	Non-Golf Course
1976 - 79	19.5%	16.5%	21.8%
1979 - 82	4.0%	6.8%	3.2%
1982 - 85	9.6%	9.6%	9.6%
1976 - 85	9.8%	10.9%	9.6%

GOLF COURSE FEES

Seven public or generally open to the public courses were surveyed for current green and golf cart fees. The public courses at City Park are the best maintained and most modern of these courses. There are usually long lines of golfers waiting to play. The green fees of $17 - $22 and golf cart fee of $15 are indicative of a public course fee structure for a new municipal course. The combined total fee is $32 to $37 per golfer per round. The cheaper fees at the other courses are consistent with the poor condition of their courses and equipment.

Private courses available for fee play were also surveyed. Their typical green fee for non-member play, if allowed, was $55 plus a golf cart fee of $10 to $20. The combined total was typically $65 or more for a well maintained course. These courses generally did not seek non-member play except for the far outlying locations such as Willowdale, Belle Terre and Oak Harbor.

Jefferson Parish is the second most populous parish in the State of Louisiana. Nationally, it is extraordinary for a county with over 450,000 persons and a relatively affluent population to not have even one municipal golf course.

Table Eleven

FEES AT PUBLIC GOLF COURSES
MODESTLY PRICED PRIVATE COURSES
1994

Public Courses	Green Fee	Cart Rental
City Park (Orleans)	$22.00	$15.00
Audubon Park (Orleans)	$10.00	$ 7.50
Pontchartrain Park (Orleans)	$ 9.00	$15.95
Royal (Slidell)	$11.00	$17.00
Brechtel Park (Orleans)	$ 7.00	$12.00
Braithwaite (Plaquemines)	$10.00	$10.00
Bayou Barriere (Plaquemines)	$12.00	$10.00
Typical	$10.00	$15.00

Table Twelve

GOLF CLUB MEMBERSHIPS AND NON-MEMBER FEES
1994

Country Club	Membership Fee	Monthly Dues	Non-Member Green Fee	Non-Member Cart Fee
Eastover	$1,000	$125	$60*	$10.00
Beau Chene	$5,000	$120	$35*	$20.00
Chateau Estates	$ 540	$125	No*	$ 9.00
English Turn	$9,000	$215	No-$50*	$12.00
Belle Terre	$ 500	$115	$38*	$10.00
Tchefuncte Club	$2,165	$167	No*	$10.00
Lakewood	None	$179-$185	No*	$10.00
Timberlane	$500-$1,250	$132	No*	$ 9.00
Stonebridge	$ 500	$103.50	No*	$ 8.75
Oak Harbor	Part of Lots	$ 75	$35	$10.00
Willowdale	$ 650	$ 75	$20	$10.00
Typical	$ 600	$130	$55	$10.75
Range	None-$9,000	$75-$215	No-$60	$9-$20

* Guest of member only

AVAILABLE NON-WETLAND PARCELS
WESTBANK OF JEFFERSON AND ORLEANS PARISHES

In open public court testimony Mr. Irv Eppling, MAI, as an expert witness regarding litigation between the West Jefferson Levee District versus Dr. & Mrs. Zaslow in the Twenty-fourth Judicial District in January of 1996, presented a large map he had secured from the U.S. Army Corps of Engineers. This colorized map (enclosed) was dated from 1991. It showed in yellow areas which were likely to be considered jurisdictional wetlands. Areas colored blue were locations which were not expected to be classified as jurisdictional wetlands.

Subsequently, in two separate sworn depositions Dr. Buddy Baehr of the U.S. Army Corps of Engineers discussed each non-wetland parcel identified on the map (Zaslow case and K-2 et al). I have further examined that testimony along with a tabular presentation which identifies the approximate acreage in each parcel (Tables 13 to 16). Also shown are development restraints based on my judgement, physical inspection in some cases and Dr. Baehr's deposition testimony.

Altogether the 1991 map identifies 5,285 acres of non-jurisdictional wetlands on the Westbank of Orleans and Jefferson Parishes as well as land in Plaquemines near Belle Chase. (See Table 13.) Parcels larger than 200 acres account for nine parcels of 3,690 acres. Parcels near the subject within the Barataria Corridor (Manhattan to Bayou Sequette, Lapalco to Bayou Barataria) account for 924.6 acres in 17 parcels. Within the Barataria Corridor there are 621.6 acres of residentially zoned land and 303 acres of industrial or commercially zoned land.

Table Thirteen

TOTAL NON-JURISDICTIONAL WETLANDS AS OF 1991

Acres:	5285 acres of non-jurisdictional wetlands
Parishes:	Jefferson (Westbank) Orleans (Westbank) Plaquemines (Belle Chase)
Parcels:	44
Tracts larger than 200 acres:	3690.1 acres, see Table Fourteen 9 parcels 71% of land
Tracts in or near Barataria Corridor:	924.64 acres (total) See Table Fifteen 17 parcels 17.4% of total 621.6 acres (residential) 13 parcels (residential) 12% of total (residential)

Source: Dr. Buddy Baehr, U.S. Army Corps of Engineers

Table Fourteen summarizes the large parcels (over 200 acres). A total of 1,407.8 acres (A&B) south of English Turn are in public ownership or the Audubon Foundation or lack sewer and water. Another 218.2 acres (C&D) are industrial property along the Intercoastal Waterway.

Within Plaquemines near Belle Chase (E) are 228.2 more acres of rural property with poor egress. Parcel HH is used for a solid waste dump site of 232 acres.

There is a 400 acre parcel (S) northeast of Lapalco and east of the Harvey Canal. The land was sold to numerous individual lot owners. It is perceived by the market to be a high crime area and assemblage by one or two owners has thus far not been feasible. In a similar condition is a 294.7 acre parcel (G) near the Donner Canal in Orleans Parish.

This leaves three parcels of over 200 acres for residential development. Parcels KK and MM are southwest of Avondale Shipyard and west of Waggaman. They are at the far edge of the market and have poor egress. Thus far, average or above average income buyers have not been attracted to this location. These parcels are not served by an interstate roadway and are in the vicinity of the WillowWood subdivision, which has had limited market acceptance. None of these parcels is suitable for a public golf course or housing oriented toward a golf course community.

Table Fourteen

PARCELS LARGER THAN 200 ACRES NON-JURISDICTIONAL WETLANDS WESTBANK OF ORLEANS, JEFFERSON, AND PART OF PLAQUEMINES PARISHES

Map Key	Acres	Location	Development Restraints
A	280	Plaquemines Parish, south of English Turn	Occupied with Tulane University Research Lab.
B	1,127.8	Orleans Parish, Lower Coast of Algiers, south of English Turn	Lacks public sewer and water; 2 lane asphalt road egress; fragmented ownership-Coast Guard land & Audubon Wildlife Refuge
S	400.0	East of Harvey Canal, northeast of Lapalco (Jeff. Parish)	Market views it as high crime location; fragmented ownership
C D	116.8 101.4 218.2	Orleans Parish, Lower Coast of Algiers, south of English Turn	Industrial zoned sites located next to Intracoastal Canal
KK MM	385.0 126.5 511.5	West of Waggaman, SW of Avondale Shipyard (Jeff. Parish)	Far edge of market; poor egress; Residential zoning
II	397.7	South of Avondale Subdivision (Jeff. Parish)	Low income housing area; lacks sewer
G	294.7	Orleans Parish; near Donner Canal	Residential zoning; platted with streets; separate ownership
E	228.2	Plaquemines Parish, adjoins Belle Chase	Rural site; poor egress
HH	232.0	Churchill Farms area (Jeff. Parish)	Used as solid waste dump site
Total	3,690.1	**Percent of non-404 Jurisdictional Wetland:** 71%	

Source: Documents supplied by Dr. Buddy Baehr and wetlands from wetland maps supplied by U.S. Army Corps of Engineers.

The last site is 397.7 acres south of Avondale. Much of the site lacks sewer. The parcel adjoins an area of moderate to low income housing. Again, this location has thus far been unable to attract average or above average income residents. It is a far longer commute to the jobs of the Harvey Canal or downtown New Orleans than the Estelle site.

In my opinion, none of these sites greater than 200 acres are competitive with the subject site as of May, 1996.

Table 15 describes seventeen parcels within the Barataria Corridor which are labeled as non-wetlands on the 1991 U.S. Army Corps of Engineers internal topographic map.

Portions of parcels BB, M, N, O and V have all been purchased for development or have actually been developed since 1991. The remaining parcels include industrial or commercially zoned areas (GG, W, X and U) which are not likely to be used for residential land that total 323 acres. The remaining residential parcels are far too small to support a planned golf course community with a municipal golf course in the Barataria Corridor. Even assembling a 130 acre vacant parcel able to house a golf course with no residential development does not appear feasible based on the acreage identified on the Corps map.

Jefferson Parish receives a substantial public benefit through the gift of the land for a municipal golf course by Estelle Plantation land owners. The $2 million or more gift of land is only likely if adjacent parcels held by the land owners are available for development.

The fact that these few parcels of non-wetlands remain in West Jefferson is a tribute to the marketplace's diligence in finding land for development. Conversations with large scale development firms such as Sunrise Homes, JBL Homes and Mitchell Corporation have all reiterated their extreme difficulty in finding parcels suitable for subdivision development in West Jefferson. In East Jefferson the land shortage has caused numerous buildings to be purchased and demolished for new construction. Commercially and industrially zoned land has been purchased for apartment construction. A former sewerage plant site has been made into a subdivision. There is a growing land shortage evident in Jefferson Parish.

Table Fifteen

NON WETLAND PARCELS IN BARATARIA CORRIDOR

Map Key	Acres	Description
BB	114.7	Near Oak forest site; Highway 45 access; sewer and water available
U	166.0	Industrial parcel east of Woodmere on Destrehan Blvd.
AA	14.18	Small residential parcel at front of Bent Tree Subdivision
Z	7.72	Frontage on Lafitte-LaRose Hwy. near Bent Tree Subdivision
V	113.0	Residential parcel with sewer and water
Y	15.0	Small residential parcel
CC	21.7	Irregularly shaped residential parcel
X	28.1	Commercially zoned parcel near Lapalco Blvd.
W	37.0	Commercially zoned parcel near Lapalco Blvd.
P M N O	101.4 44.8 42.2 79.1 267.5	Remainder of parcels in original Lake Timberlane/Stonebridge assemblage. Remainder of 1,517 acres purchased in 1981 for Lake Timberlane Planned Community.
FF EE DD	29.14 17.9 20.8 67.84	Residential parcels south of Mayronne Canal. Moderate to low income housing adjoining.
GG	71.9	Commercially zoned parcel
Total	924.64	17.4% of total non-404 Jurisdictional Wetlands
Residential Total	621.6	12% of all non-404 Jurisdictional Wetlands

Source: Map of Westbank of Jefferson and Orleans prepared by U.S. Army Corps of Engineers, Aerial photographs from 1985, Exhibits provided by Dr. Buddy Baehr, U.S. Army Corps of Engineers.

Table Sixteen is a tabulation of the acreage as supplied by Dr. Baehr in response to request for production in the Zaslow case involving eminent domain actions of the West Jefferson Levee District.

The lack of sufficiently large non-wetland parcels suitable for development as a golf course community including housing and an 18 hole municipal course in a location suitable to the marketplace indicates to this analyst that a low quality wetland parcel would be required to meet the market's needs for these facilities.

Table Sixteen

ACREAGE OF LAND NOT SUBJECT TO COE JURISDICTION FOR WESTBANK AREA

Map Key	Acres
A	280
B	1127.8
C	116.8
D	101.4
E	228.2
F	34.7
G	294.7
H	40.4
I	12.4
J	94.2
D	16.1
L	7.2
M	44.8
N	42.2
O	79.1
P	9.7
Q	13.4
R	120.3
S	400.0
T	9.1
U	166.0
V	113.0
W	28.1

Map Key	Acres
X	37
7	15
Z	7.12
AA	14.18
BB	114.7
CC	21.7
DD	20.8
EE	17.9
FF	29.14
GG	71.9
HH	232.0
II	397.7
JJ	148.7
KK	385.0
LL	21.45
MM	126.5
NN	183.7
OO	41.1
PP	5.3
QQ	4.2
RR	10.3
Total	**5,233.0**

Source: Estimates of non-wetland acreage from 1991 supplied by Dr. Buddy Baehr of the U.S. Army Corps of Engineers.

Note: Parcels OO, PP, QQ not counted due to existing development.

APPRAISER OPINIONS OF HIGHEST AND BEST USE AND MARKET VALUE FOR NEARBY PARCELS

For the past seventeen years a variety of competent appraisers have issued written statements on the appropriate uses and values for parcels of land near the subject site. To assist the reader I have presented these opinions of value chronologically with identifying maps for each parcel. These appraisals span thousands of pages of documents which were produced as part of litigation involving the National Park Service or the West Jefferson Levee District. All of the documents were subject to production under current public document laws.

The first group (Table 17) are appraisals commissioned by the U.S. Park Service to assist them in purchasing property for the Jean Lafitte National Park. The appraisals occur between July, 1979 and May, 1984. The parcels are generally south of the existing "V-levee" and have never been within a levee system (existing or prepared).

Each of the parcels was considered to have some or all of its use as suitable for development.

The National Park Service in two instances internally updated opinions of value without altering their highest and best use conclusions of residential development.

Opinions of Appraisers Employed by the National Park Service

Between September, 1979 and May of 1984 a total of 20 appraisals were prepared by appraisers selected by the Park Service of parcels 1.0 or more acres in size with commercial or residential highest and best use within two miles west of the subject site. All of these appraisals were done prior to the Park Service negotiating a sales price with the land owner. The appraisers were Mr. Robert Merrick, MAI., Mr. Joseph Billa, MAI and Mr. Peter J. Tulluto, MAI.

Table Seventeen describes appraisals by Mr. Merrick and Mr. Billa of large parcels of land generally outside of any levee system with no sewer, outside of any drainage district and with limited water access since they are within the "no water supply" zone of the Marrero-Lafitte Highway south of the "V-levee".

These four appraisals are for large tracts of 151 to 464 acres. At the date of the appraisal, the residential land value estimates were:

Acres	Value per Acre	Date
151.0 acres	$ 7,830	5/84
44.47 acres	$ 9,150	9/80
230.0 acres	$10,000 to $14,000	9/80
464.0 acres	$ 5,600	1/82 (developable portion only)

Table Eighteen lists six smaller parcels with residential highest and best use appraised by Mr. Peter J. Tullato from 1980 to 1985. These parcels are also about two miles west of the subject on Louisiana Highway 45. They were outside of the levee protection system, lacked sewer, lacked drainage and had limited water availability. The five appraisals in 1983 to 1985 were identified as having a highest and best use for suburban residential development with average values of $26,486 per acre and $22,220 per acre being typical.

Table Nineteen lists eight parcels with future commercial usage appraised by Mr. Peter Tulluto, MAI from 1979 to 1983. All of these parcels were outside of the levee system, had no drainage or sewer and had visibility on a two lane winding asphalt road (Louisiana Highway 45) rather than the four lane divided highway of Lafitte-LaRose. The ten appraisals average $29,800 over the four years. The 1983 land value for a 20 acre tract similar to the C-2 zoned parcel fronting Lafitte-LaRose in the Dietze Tract was $43,560.

Table Seventeen

OPINIONS OF MARKET VALUE
PREPARED FOR NATIONAL PARK SERVICE
1979 - 1983

A.1 June 20, 1983 by Mr. Robert Merrick MAI, SIR (Tract 101-18)

Location:	151 acres, 1.5 miles west of subject, Parcel S, Perkins Tract
Portion Within Levee Protection:	Old BDF levee; assumes inside growth management line
Sewer Access:	2 miles north on Hwy 45
Water Service:	10" waterline in Highway 45, fronting subject site
Elevation:	52.82 acres of +1 MSL or higher 98.18 acres below +1 MSL classified as marsh
Rate of Price Appreciation:	6%/year (p.69)

Highest & Best Use:

a) 10.16 acres on Hwy. 45 for speculative commercial development
b) 42.66 acres for future residential development
c) 98.18 acres of marsh speculative future use

Opinion of Market Value:

a) 10.16 commercial acres: $32,277/acre
b) 42.66 residential acres: $7,457/acre
c) 98.18 marsh acres: $500/acre (See p.72 of appraiser)

A.2 Updated to 5/21/84 by National Park Service Staff (internal document)

a) 10.16 commercial acres: $34,100/acre
b) 42.66 residential acres: $ 7,830/acre
c) 98.18 acres of marsh: $525/acre
(p.2 of 101-18 supplemental information on appraisals)

Note: Assumed 6% price appreciation per year

OPINIONS OF MARKET VALUE
PREPARED FOR NATIONAL PARK SERVICE
1979 - 1983
(Continued)

B.1 September 8, 1980 by Mr. Robert Merrick, MAI, SIR (104-39)

Location:	1 mile west of subject site, 442.47 acres
Portion Within Levee Protection:	None
Sewer Access:	1.5 miles north on Hwy. 45
Water Service:	10" water line on Hwy. 45 and a 16" line on Lafitte-LaRose Hwy.
Elevation:	Site is 3 to 5 feet above MSL
Highest & Best Use:	Residential Development
Opinion of Market Value:	442 acres: $9,150/acre as of Sept. 8, 1980

C.1 September 8, 1980 by Mr. Robert Merrick, MAI, SIR (Tract 101-17)

Location:	¼ mile south of subject site, 229.8 acres
Portion Within Levee Protection:	None
Sewer Access:	3 miles north on Hwy 45
Water Service:	8" waterline in Highway 45
Elevation:	76 acres +1 MSL or higher 80 acres 0 to +1 MSL 72 acres marsh

Highest & Best Use:

a) 10.16 acres on Hwy. 45 for speculative commercial development
b) 42.66 acres for future residential development
c) 98.18 acres of marsh speculative future use

Opinion of Market Value:

a) 22 acres of highest elevation: $14,000/acre
b) 54 acres of +1 MSL: $10,000/acre
c) 153.8 acres of marsh: $200/acre
as of September 8, 1980

OPINIONS OF MARKET VALUE
PREPARED FOR NATIONAL PARK SERVICE
1979 - 1983
(Continued)

D.1 July 10, 1979 by Mr. Joseph Billa, MAI (101-16)

Location:	Part of Subject Tract (Dietze) prior to Park Service acquisition, 464 acres
Portion Within Levee Protection:	None
Sewer Access:	2 miles north
Water Service:	Highway 45, 8" line
Elevation:	50% below 0 MSL 50% above 0 MSL
Rate of Price Appreciation:	10% per year or more (p.15)
Highest & Best Use:	Speculative Residential
Opinion of Market Value:	464 acres: $3,300/acre as of July 10, 1979 ½ developable, ½ outside Growth Management Line $5,600 developable

D.2 National Park Service Revision as of January, 1983 (internal documents)
464 acres: $4,125/acre gross; $7,250 developable acres
Appreciation rate: 10% per year

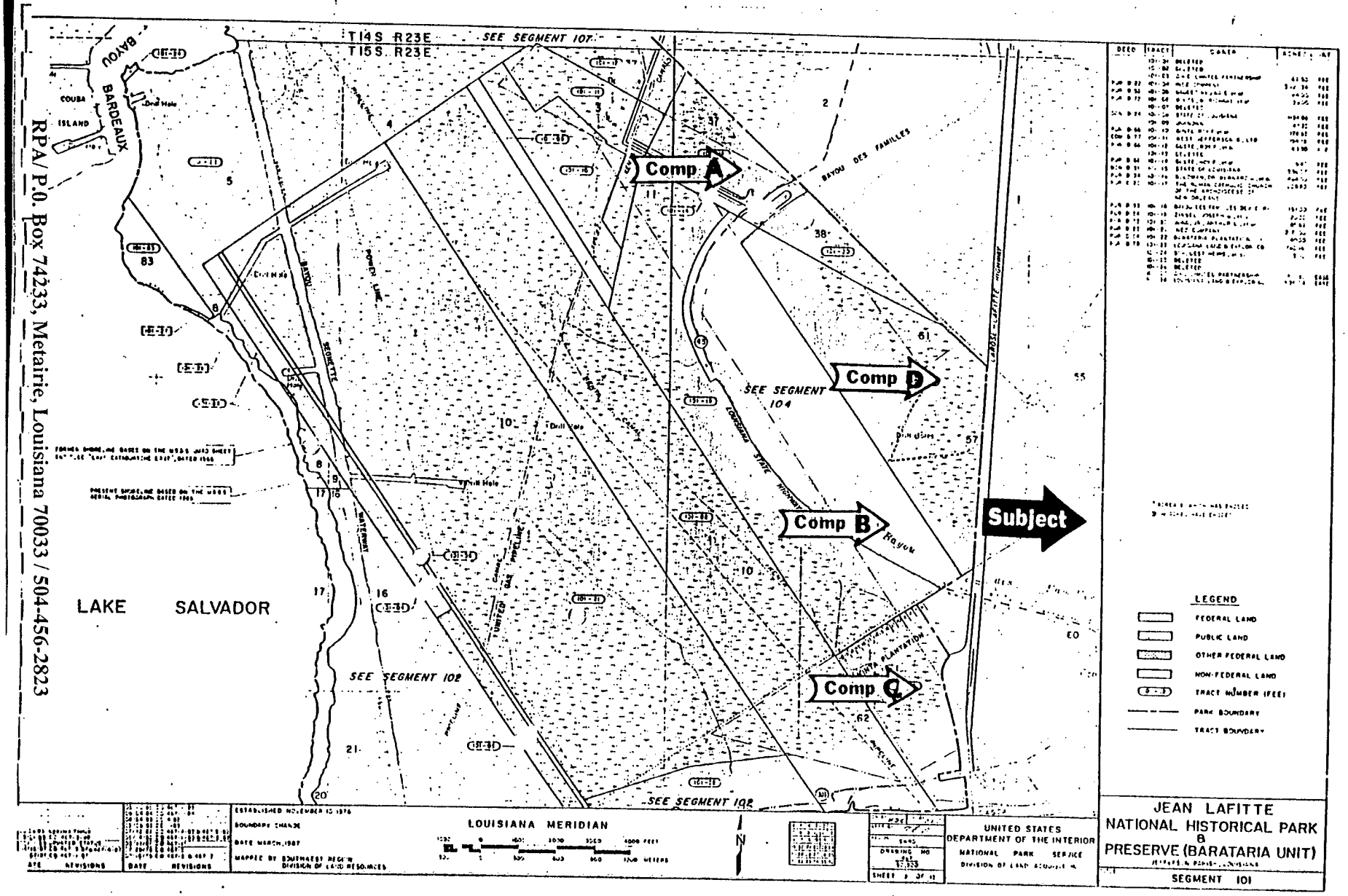

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Table Eighteen
PETER J. TALLUTO, MAI
RESIDENTIAL PARCELS

APPRAISALS PREPARED FOR NATIONAL PARK SERVICE
PARCELS TO BE ACQUIRED FOR JEAN LAFITTE NATIONAL PARK

Parcel	Acres	Land Use	As of Date	Market Value	Price per Acre
104-25	6	Future Residential	9/28/80	$54,000	$9,000
104-26	9	Suburban Campsites	9/29/80	$81,000	$9,000
104-23	12	Suburban Campsites	9/29/80	$108,000	$9,000
104-40	3	Suburban Residential	5/11/83	$66,647	$22,218
104-18	5	Suburban Residential	5/12/83	$217,800	$43,560
104-18	3	Suburban Residential	5/12/83	$66,647	$22,216
104-20	3	Suburban Residential	2/14/85	$66,650	$22,218
104-20	1.5	Suburban Residential	2/14/85	$33,325	$22,217

General Physical Characteristics

Utilities: Electricity; no other utilities; sewer and water 1 to 2 miles north

Levee: None

Elevation: Similar to subject

Distance from Subject: 1.5 to 2 miles

Road Egress: Highway 45, two-lane winding asphalt road

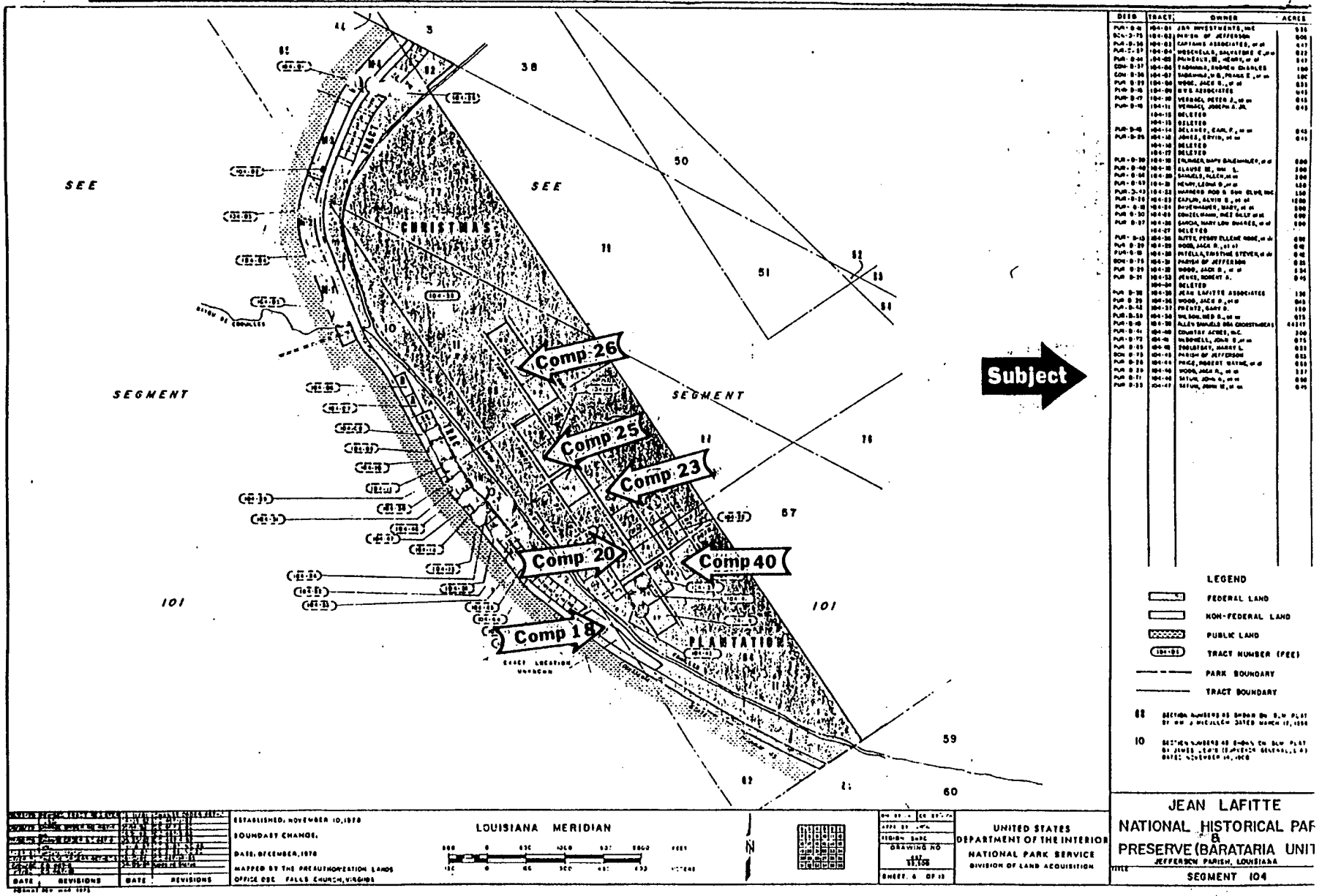

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Table Nineteen

PETER J. TALLUTO, MAI
COMMERCIAL SITE PARCELS

APPRAISALS PREPARED FOR NATIONAL PARK SERVICE
PARCELS TO BE ACQUIRED FOR JEAN LAFITTE NATIONAL PARK

Parcel	Acres	Land Use	As of Date	Market Value	Price per Acre
104-28	8.08	Future Commercial	9/1/79	$263,938	$32,670
104-01	9.36	Future Commercial	9/1/791	$305,791	$32,670
104-08, 09,31,33, 44,45,36	9.07	Future Commercial	9/26/80	$316,071	$34,848
104-06	1.0	Future Commercial	8/17/81	$47,916	$47,916
104-07	1.0	Future Commercial	8/17/81	$47,916	$32,670
104-05	5.47	Future Commercial	9/1/79	$178,705	$25,900
104-03	4.47	Future Commercial	9/19/80	$155,771	$32,670
101-19	20.0	Future Commercial	5/12/83	$876,927	$43,560

General Physical Characteristics

Utilities: Electricity; water; sewer available 1 to 2 miles north

Levee: None

Elevation: Similar to subject

Distance from Subject: 1.5 to 2 miles

Road Egress: Highway 45, two-lane winding asphalt road

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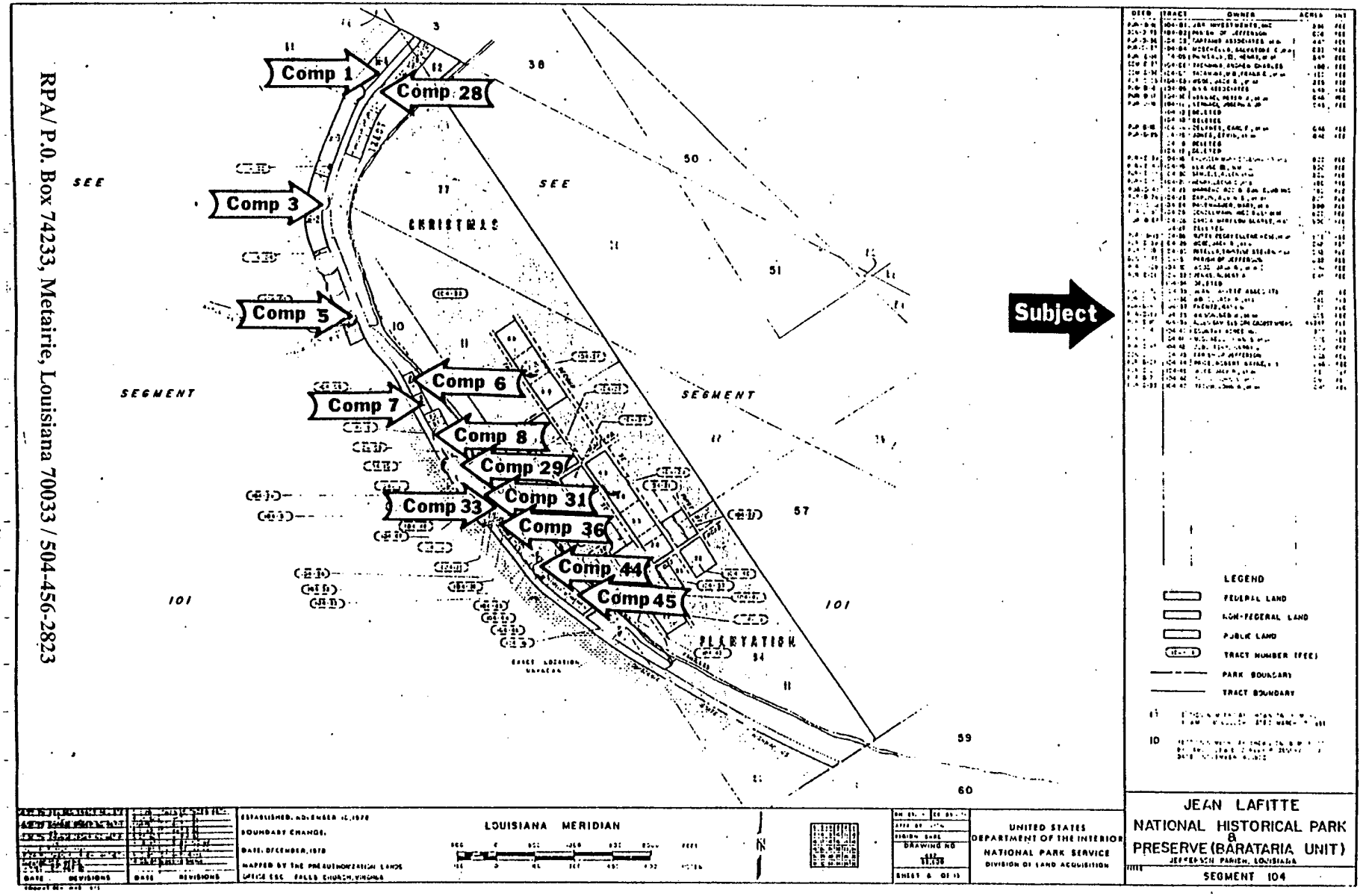

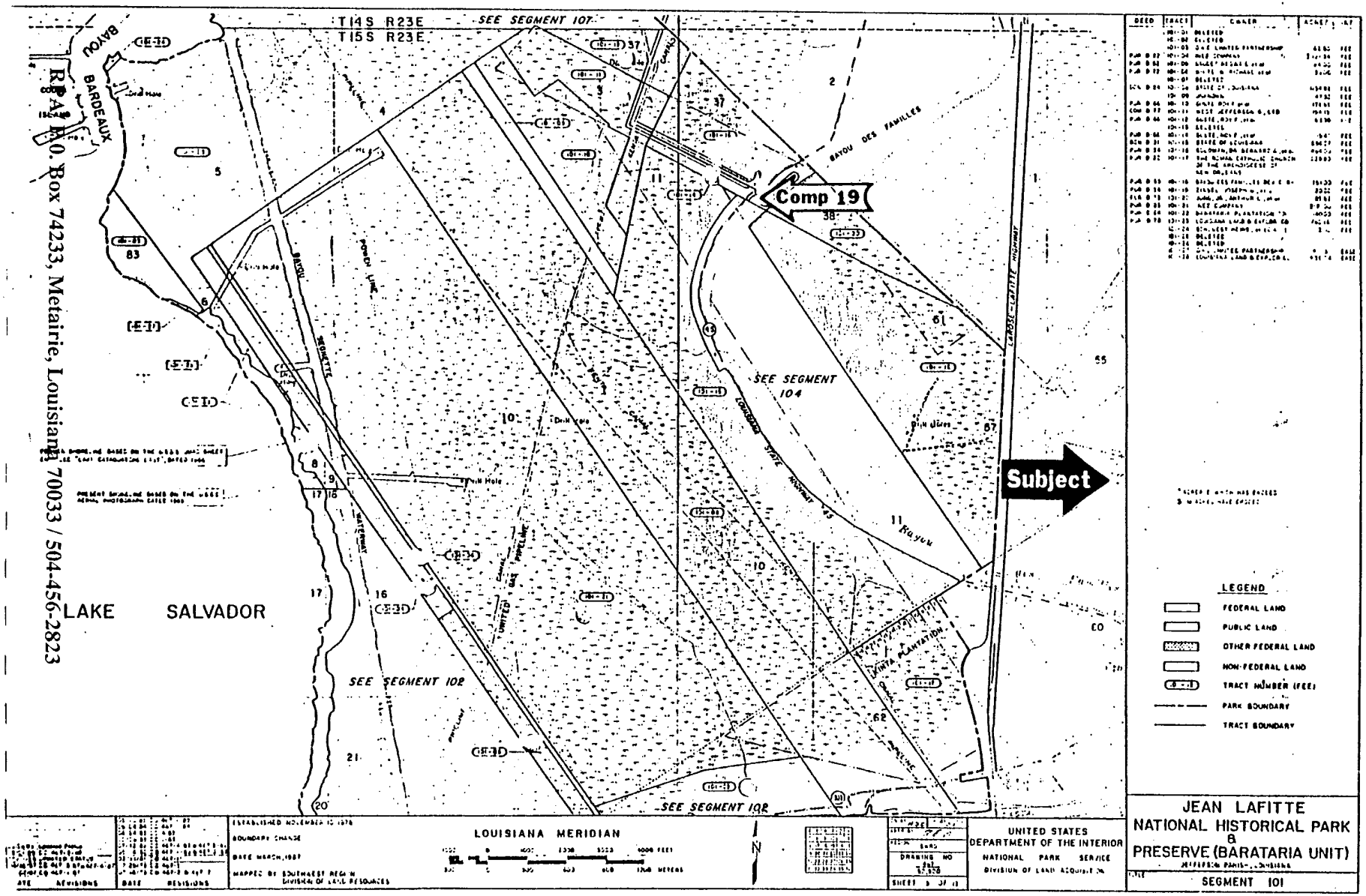

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COURT TESTIMONY BY MR. IRV EPPLING, MAI

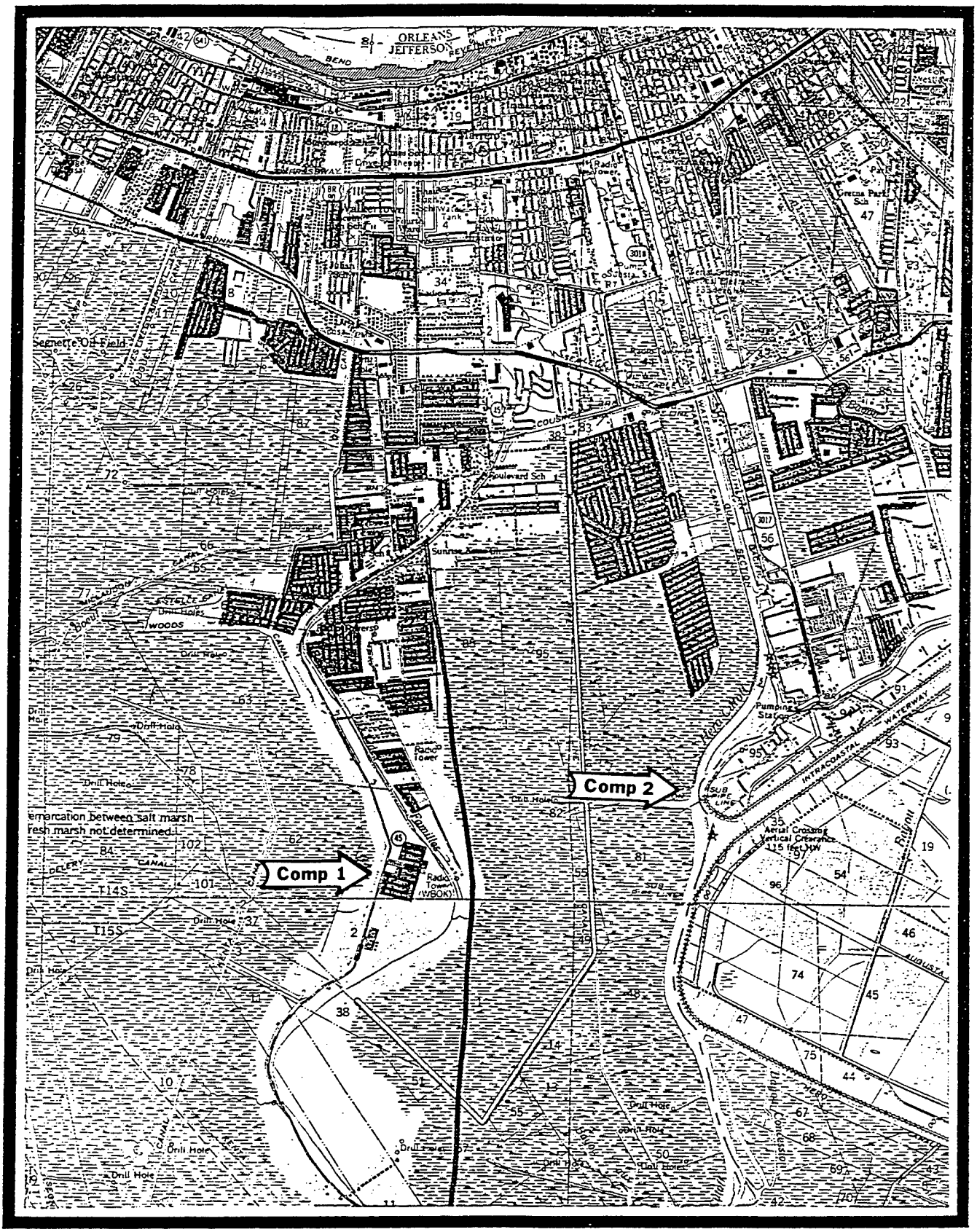
In February of 1987 Mr. Irv Eppling, MAI, tendered an opinion of market value for 4.96 acres of industrial zoned land directly north of the Estelle Outflow Canal just east of the subject, Estelle Plantation parcel. The parcel had access to Bayou Barataria and was to be acquired by the West Jefferson Levee District for a levee right of way. Mr. Eppling was retained by the West Jefferson Levee District.

The two parcels are listed on the next page with a location map.

These parcels lacked sewer, water and access road at the time of the appraisal and for the foreseeable future. They were within a drainage district.

Mr. Eppling appraised these parcels for $12,620/acre for a 3.43 acre parcel and $13,461/acre for a 1.53 acre parcel. Clearly, Mr. Eppling estimated land values based upon a strong likelihood of developability in the near future.

In a similar manner he testified in the 24th Judicial District (WJLD vs. BDF et al) to an appraisal of 57.40 acres of residential land (Parcel S of the Perkins Tract) on Barataria Blvd. as of February, 1988 which were inside of a drainage levee, had water access but no sewer and were classified as a jurisdictional wetland on the map he supplied from the Corps of Engineers. He testified to a $23,000 per acre land value in 1988 for this parcel one mile west of the subject at a time period when he has publicly testified land values had declined from their 1985 peak value in 1988. He did not classify these parcels as being future speculative residential land nor does he assign a land value consistent with a long term speculative use. At that same time he appraised 5.917 acres of commercially zoned land adjacent to the residential parcel on the two lane, asphalt Louisiana Highway 45. He concluded that the market value in February, 1988 was $1.30 per square foot and says in court testimony this is 30% to 40% cheaper than their market value in 1985. This would be a market value for commercially zoned property of about $55,000 in 1985 dollars - the peak in the market at that time. Mr. Eppling in that case had also been retained by the West Jefferson Levee District.



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Comparable Sales

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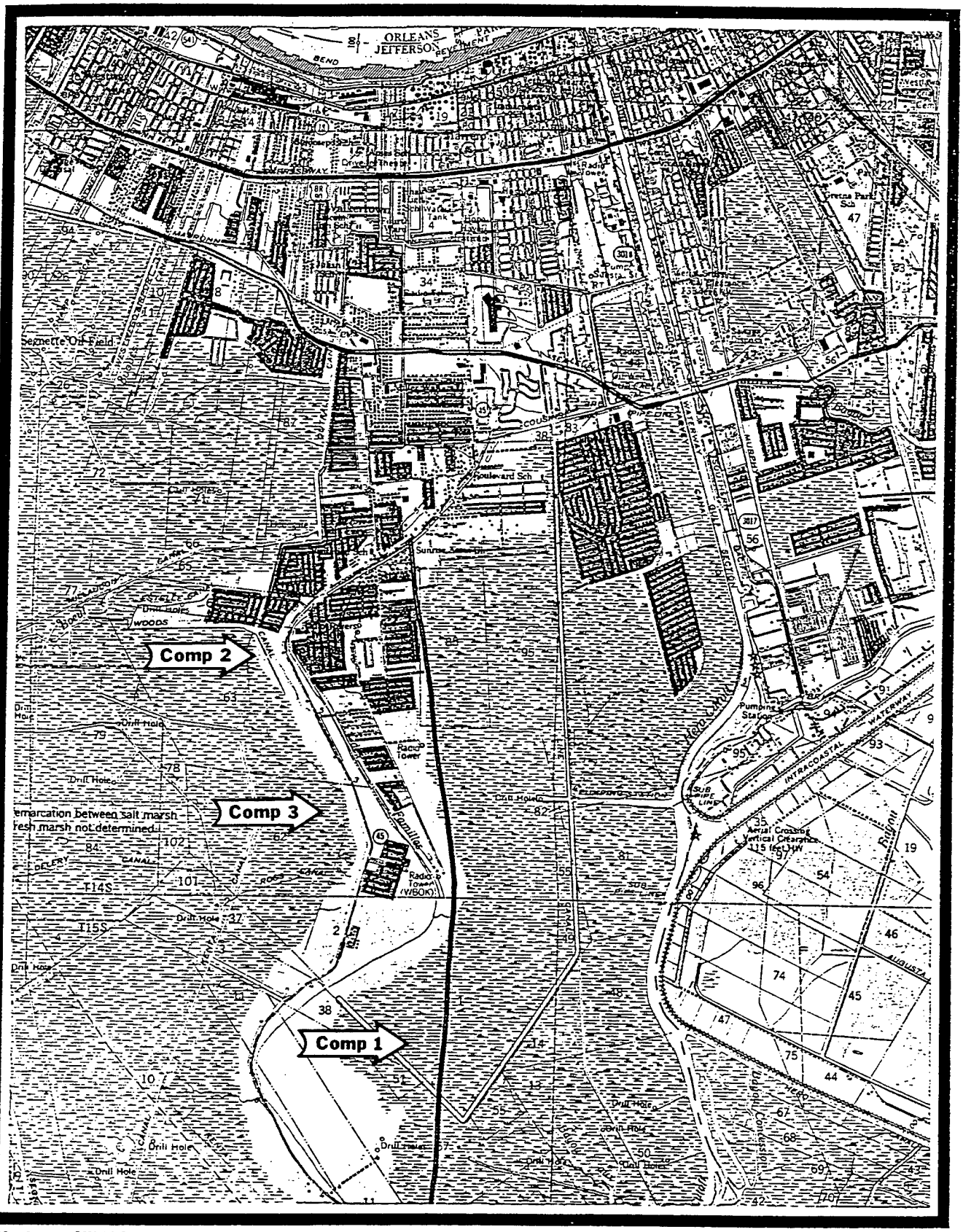
OTHER COURT TESTIMONY

A recent group of appraisals have all focused on land near the subject either within the hurricane protection levee or as if the site was within the levee. In each case, a complete development approach analysis and market feasibility study was conducted. All of these appraisals have been subject to deposition questioning or court cross examination.

As of June 26, 1991, a 167.1 acre parcel owned by Dr. and Mrs. Zaslow adjoining the protected side of the "V-levee" was appraised by Wade Ragas, PhD, MAI. The estimated market value was $11,760 per acre with a highest and best use of residential development by 1995. Judge Tienmann of the 24th Judicial District accepted the arguments put forth in this opinion of value and ruled for damages based on the appraisal in favor of Dr. and Mrs. Zaslow.

As of October, 1994, both Dr. Ragas and Mr. Richard Brewster, MAI, tendered opinions of market value on four parcels within the Perkins Tract identified as parcel 1C-1 (101.26 acres), K-3 & K-4 (69.04 acres) and K-2 (92.6 acres in parcel O). The opinion of market value by Dr. Ragas was $15,250 per acre and by Mr. Brewster was $16,000 per acre. These appraisal opinions included lot absorption studies and development approaches to value based on engineering cost opinions. The elevation and character of these sites are similar to, although somewhat inferior when compared to the Estelle Plantation Parcel. Mr. Pat Egan, MAI, of Robert Merrick Appraisals, agreed with these opinions of value if the parcels were within a hurricane protection levee. Mr. Eagan was retained as an expert by the National Park Service.

The history of appraisal opinions (including more than a dozen I have not cited) from 1979 to 1996 on parcels near the subject in the Barataria Corridor is clear. Parcels within the levee and subject to drainage were viewed as being currently developable. The highest and best use was generally found to be single-family residential for either immediate or near term future development. Parcels with sewer and water available of a size suitable for residential development were estimated to be worth between $11,500 to $16,000 per acre between 1990 and 1996. However, none of these opinions of value considered a golf course community, which usually commands a substantial price premium in the market place.



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Comparable Sales

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LOT ABSORPTION RATES NEAR ESTELLE PLANTATION

Due to a shortage of land in West Jefferson available for development without the need for a Section 404 permit, only a few subdivisions have been developed. Thus far I have tabulated lot sales activity and prices for five subdivisions on the Westbank of Jefferson and Orleans Parishes in the course of analyzing the market values of parcels C-1, K-3, K-4 and K-2 (part of O) of the former Perkins Tract now known as the Bayou Des Familles development. Mr. Richard Brewster, MAI also performed an independent absorption analysis of six other subdivisions on the Westbank, including parts of Plaquemines Parish. Subdivisions such as Barkley Estates and Grande Terre have been updated to December 1995. Ridgecrest is not actively seeking lot buyers since the developer is building houses on each lot themselves. I will update the sales of houses at Ridgecrest shortly.

The survey period, sales, sales per quarter and typical lot price from these appraisal reports by Richard Brewster MAI and Wade Ragas, Phd MAI, which have been submitted as expert reports in the U.S. National Park Service vs. Land (K-2, K-3, K-4, 1C-1 which total over 200 acres), to be heard in the Federal District Court in June of this year, all demonstrate that current development was feasible. Under oath during a deposition Mr. Patrick Eagan, MAI also agreed if the sites were within the hurricane protection levee residential development would be feasible. The appraiser's conclusion of residential subdivision usage as the highest and best use means in their opinion that there is a "market need" for the development of these parcels now.

A total of 616 lots were recorded as sold across the eleven developments as of Fall, 1995. A total of 921 lots were approved for development. Most of these lots had been built by April, 1996. I am now updating these lot sales totals to April, 1996. Probably another 20 lots per month were sold, or 120 more lots across five active subdivisions. The lot inventory as of Fall, 1996 was about 300 lots. A sales rate of 30 or so per month was typical in the recent past. I expect the lot inventory as of April to be about 180 lots. This would be a six month supply of lots. I can not find any large supply of unsold lots in new subdivisions within West Jefferson or Westbank Plaquemines. I have not yet tabulated lot sales at English Turn or available inventory. Similarly, I have not yet searched for lots held by builders awaiting sale or house construction in Lake Timberlane/Stonebridge.

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Map Code	Subdivision	Total Lots	Number Sold	Survey Period	Months	Sales per Month	Avg. Sale Price	
							Lot	Sq. Ft.
1.	Lake Timberlane 4	157	157	6/91 - 12/94	42	3.7	$19,200	$2.81
2.	Magnolia Trace	29	18	1/95 - 7/95	6	3.0	$55,600	n.a.
3.	Ridgecrest	60	35	11/94 - 7/95	8	4.4	$26,400	$3.33
4.	Shadowlake Ext. 3	44	43	6/93 - 3/94	9	4.8	$24,700	$3.74
	Shadowlake Ext. 4	36	36	6/94 - 3/95	9	4.0	$22,100	$4.09
5.	Grand Terre	95	23	5/95 - 12/95	6	3.8	$43,700	$3.65
6.	Windsor Place	36	26	6/94 - 7/95	12	2.2	$41,100	$3.79
7.	Woodlands	85	85	9/93 - 5/95	21	4.0	$36,900	$3.62
8.	Barkley Est.	264	78	3/94 - 12/95	22	3.5	$40,500	$3.80
9.	Bent Tree Est.	37	37	11/92 - 12/94	24	1.6	$21,433	$3.76
10.	Debattista Pl.	36	36	5/93 - 11/94	18	2.0	$35,944	$6.25
11.	Woodlands	42	42	11/93 -11/94	12	3.5	$36,972	$3.83

Source: Appraisal reports of Richard Brewster, MAI (Parcels K-3, K-4, Perkins Tract dated April 12, 1996 and Wade Ragas PhD, MAI, (Parcels K-2, K-3, K-4, Perkins Tract) dated April 15, 1996.

Note: Barkley Est., Lake Timberlane, Grande Terre and Windsor have all experienced substantial lot sales not reported here between Aug., 1995 and April, 1996.

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These counts of recorded lot sales reveal a very small inventory of finished lots still unsold as of mid 1995. The typical subdivision sold three to four lots per month for lots priced between $33,000 and $60,000. Among these average income and above average income subdivisions the only existing lot inventory is in Barkley Estates and Grand Terre.

The only significant lot inventory is in Barkley Estates which had 186 lots under development or unsold as of December, 1995. At the historic lot sales rate of 3.5 per month, this development would have a four year supply. However, the lack of competitors - only Magnolia Trace and Ridgecrest in West Jefferson - means a more rapid rate of sales this summer is likely. The history of golf course development presented herein shows it is not unusual for large developments like a golf course community to have a development period of 10 to 13 years. A 264 lot subdivision like Barkley Estates would be one of several large residential subdivisions serving the markets for 5 or 6 years during its sales period. The fact the developer has gone forward with lender approval to construct more lots than immediately needed means they are anticipating a further increase in demand in the near future. Current employment gains in the oil service industry on the Westbank and their lack of competition in the future by other subdivisions would be consistent with these judgments by the land owners.

Barkley Estates is equivalent in lot quality to the proposed Estelle development but has no golf course. Grand Terre is in Plaquemines near Jesuit Bend, as is Windsor Place and Woodlands. They are far removed from most job centers and access to the rest of the market is poor. Nonetheless this area is experiencing rapid growth.

The Lake Timberlane extensions are not part of the golf course community. Sales in the golf course community have not yet been researched.

CONCLUSION

Thus far in this research, the actual rates of market sales would support lot prices not on a golf course of $40,000 to $55,600 with a price per square foot of $3.50 to $3.80. An expectation of 3.5 to 4 lots sold per month for locations without a golf course is reasonable. An off the course lot price of $42,000 would be reasonable. A golf course lot price of $55,000 would be a 19% premium for golf views, which is not unusual. Historically, golf course lot premiums in the New Orleans area have been 15% to 25% above lots without course views.

Actual recent court testimony on market conditions by Mr. Irv Eppling, MAI, and Rudy Aquila, PhD, MAI, indicated an expected 50 lot per year minimum rate of sales for an average income subdivision near the subject. They were retained as experts by the West Jefferson Levee District. Similarly, depositions by Richard Brewster, MAI and Wade Ragas, PhD, MAI, have also documented that average income as well as above average income lot absorption rates of 3.5 to 4 lots per month for sites near the subject as of 1996 produced financially feasible residential subdivisions without the cost of a golf course. In fact, rates of sale below three lots per month produced financially feasible subdivisions. A discounted cash flow analysis of the Estelle Plantation golf oriented community is being prepared by this analyst and should be available shortly.

Addendum A

English Turn and Eastover

FOR SALE - SEALED BID

79.87 Acres on Eastover's Golf Course

LOCATION:	Along Bullard Road and the eleventh, twelfth and thirteenth holes of Eastover's Golf Course off of Lake Forest Blvd.
ZONING:	RO-1 Residential/General Office District 67.85 Acres B-2 Neighborhood Business District 12.02 Acres
LOCATION OF SEALED BID:	LL&E Building, 909 Poydras St., Suite 1700, New Orleans, LA 70112
TIME OF SEALED BID:	Anytime before 10:00 A.M. on March 22, 1996
MINIMUM BID AMOUNT OF ACREAGE SOLD:	At least 20 acres of RO zoning, or the 12.02 acres of B-2 zoning
AVAILABLE ACREAGE WITH MINIMUM BID PRICE:	39.85 acres @ $0.75 a square foot (RO zoning) 28 acres @ $1.50 a square foot (RO zoning) 12.02 acres @ $5.00 a square foot (B-2 zoning) (See plot plan on reverse side)
COMMENTS:	The property is located along Eastover's Country Club, one of the finest golf courses in the Southeast and in an area of vigorous retail development, including Wal-Mart, Toys R Us, Pep-Boys, Shoney's, Leader Buick and Best Western.
NOTICE:	Owner reserves the right to refuse all bids.

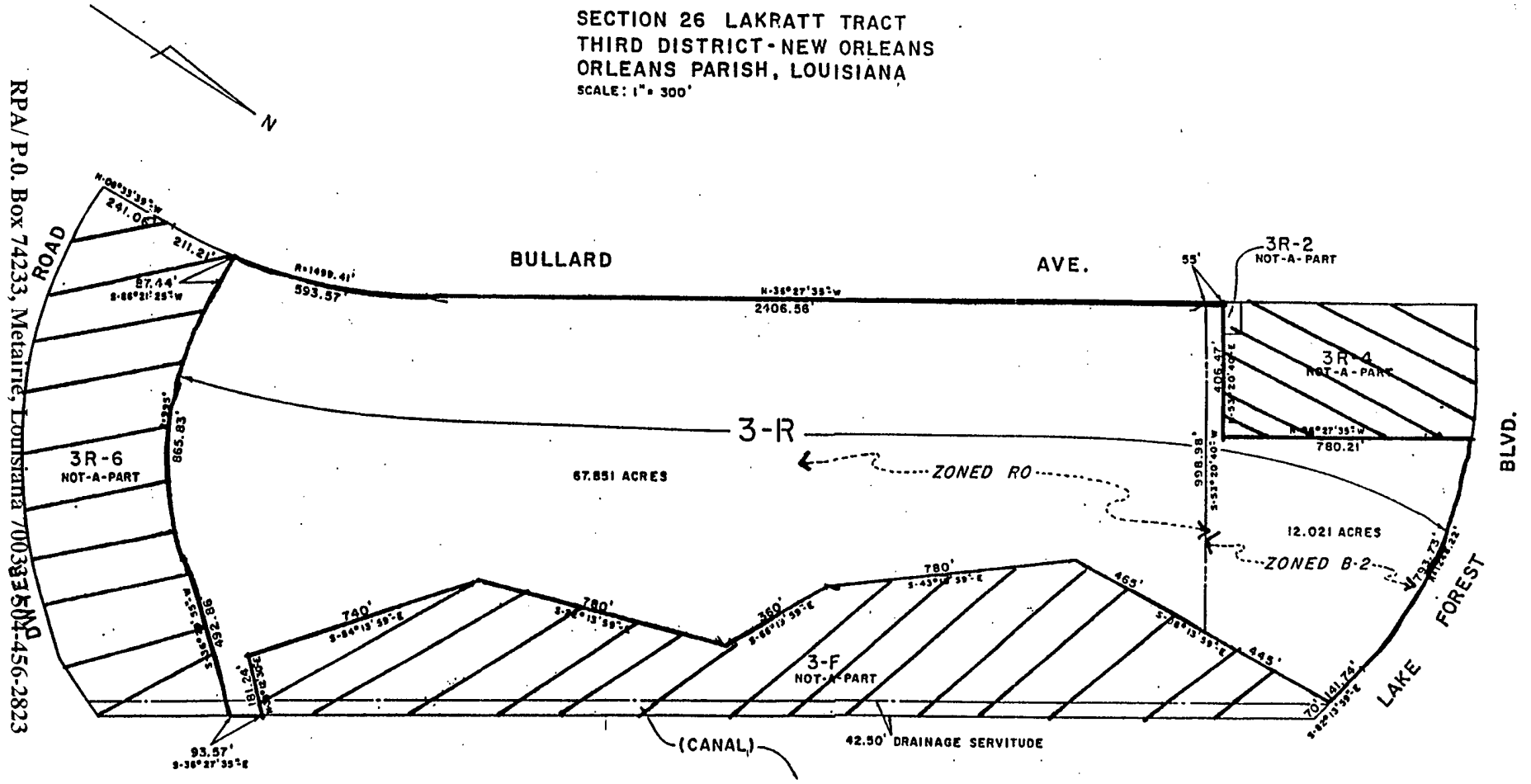
For Additional Information Contact:

Sandra G. Corrigan/David R. Wright

REAL ESTATE MANAGEMENT CORPORATION
3525 N. Causeway Blvd., Ste. 1010
Metairie, LA 70002
(504) 833-0013 - office - (504) 831-1866 - fax

Information contained herein, while not guaranteed, is from sources we believe reliable, and is submitted subject to errors, omissions, changes in terms and conditions prior to sale, lease or withdrawal notice.

SECTION 26 LAKRATT TRACT
THIRD DISTRICT - NEW ORLEANS
ORLEANS PARISH, LOUISIANA
SCALE: 1" = 300'



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KREBS & SONS, INC.
ERS, PLANNERS & SURVEYORS
METAIRIE, LA 70002 (504) 837-9470
LANE COVINGTON, LA 70433

STATE OF LOUISIANA
JOHN F. MARSHALL
REG. NO. 2488
REGISTERED PROFESSIONAL
LAND SURVEYOR

METAIRIE, LA. DEC. 22, 1988
PLAN MADE AT THE REQUEST OF LAKE FOREST, INC

CERTIFIED CORRECT
J. J. KREBS & SONS, INC.

Great News
May 5th, 1995

English Turn is now offering true lake lots in the Lakes Community. These sites are expected to be developed and ready for home construction by December 1995. Sites will range from .42 acres to .60 acres and are priced from $118,300 - $165,000. The Lake encompasses 7-1/2 acres of waterways which offers you on most of these sites a expansive (250' - 600') water view.

Keep in mind, the developer continues to offer you special incentives such as 0% financing, construction rebates, and pre-completion prices. In addition, the developer has agreed to build an entry gate allowing property owners on the south side of the golf course a more convenient access to this area.

Please call me at (504) 392-9100 for more information or a personal site tour. Hope to see you soon.

Sincerely,

Glenn Mediamolle

(over)

RPA/ P.O. Box 74233, Metairie, Louisiana 70033 / 504-456-2823

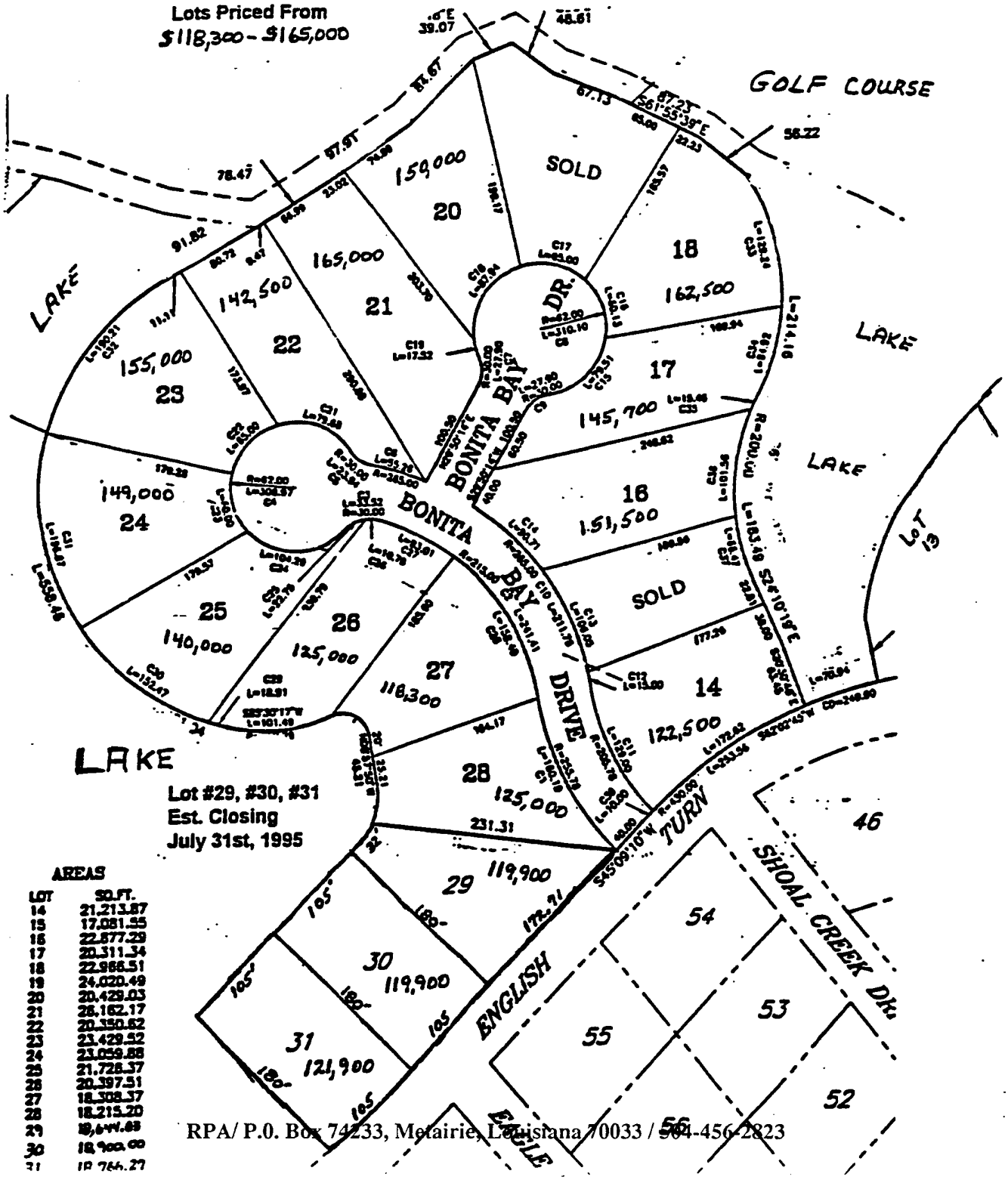
LAKES - D3

GREAT OPPORTUNITY

10% Down Payment
10% Paid at AOS
0% Financing Months 1-12
5% Financing Months 13-24
10% Financing Months 25-36

Est. Closing 12/31/95
10% Construction Rebate - 12 months after recordation of plat and use of an English Turn Featured Builder

Lots Priced From
$118,300 - $165,000



Lot #29, #30, #31
Est. Closing
July 31st, 1995

AREAS

LOT	SQ.FT.
14	21,213.87
15	17,081.35
16	22,877.29
17	20,311.34
18	22,966.51
19	24,020.49
20	20,429.03
21	26,162.17
22	20,350.62
23	23,429.52
24	23,059.88
25	21,728.37
26	20,397.51
27	18,308.37
28	18,215.20
29	18,644.68
30	18,900.00
31	18,764.27

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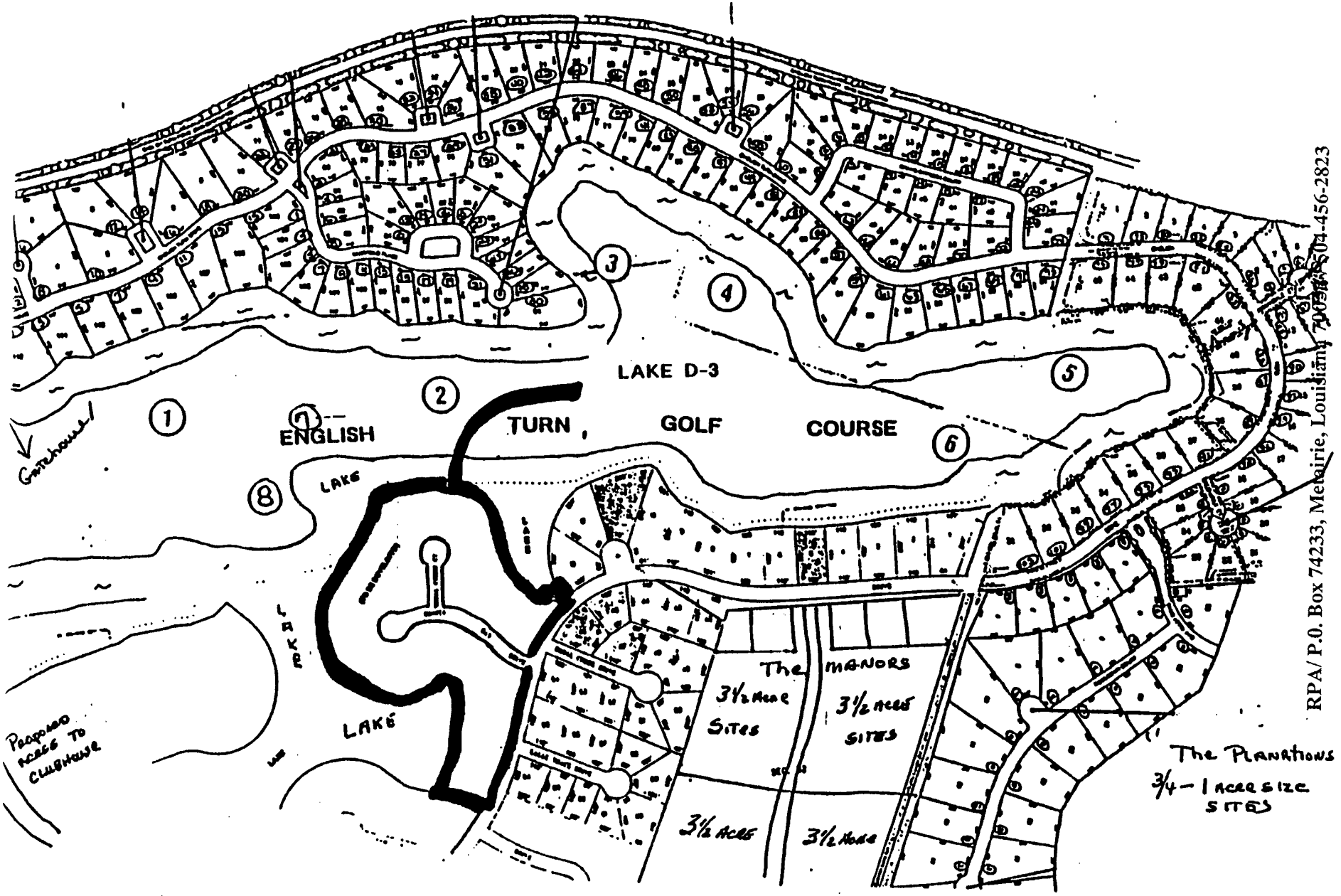

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