

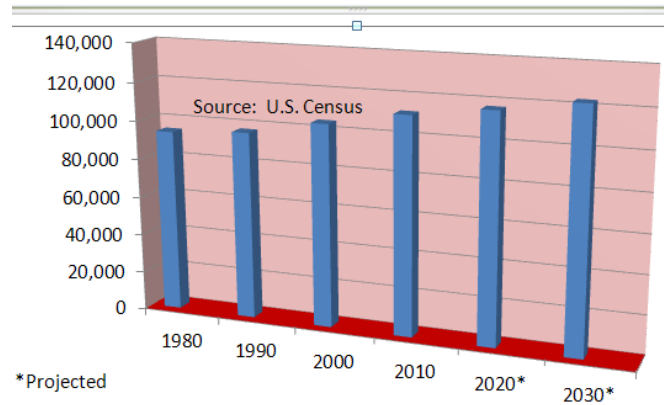
**CHAPTER 3
POPULATION AND LAND USE TRENDS**

INTRODUCTION

The single most important determinant of land use and land use trends over time may be population growth. Demand for land in the community is driven by population. If population growth is stagnant or declining, land use and development trends tend to follow suit. If, on the other hand, population is growing, then demand for living space, new subdivisions, and the commercial activity to support this growth, also tends to be reflective of this growth. Population growth also says something positive, usually, about the overall state of the local economy, and that also tends to place demand on land as new businesses compete for space. Healthy communities are growing communities, although growth may take many forms. For example, development may utilize cheaper land at the extreme periphery of the urban core, placing greater demands on infrastructure and roads as population locating in these developments are forced to rely more heavily on the private auto for work and shopping trips. On the other hand, growth may first utilize existing vacant properties within the urbanized area to creatively take advantage of existing infrastructure, placing less demand on land conversion at the periphery, lowering development costs overall, and opening homeownership possibilities to families of more moderate financial means. In a growing community, choices of this nature should abound.

POPULATION TRENDS

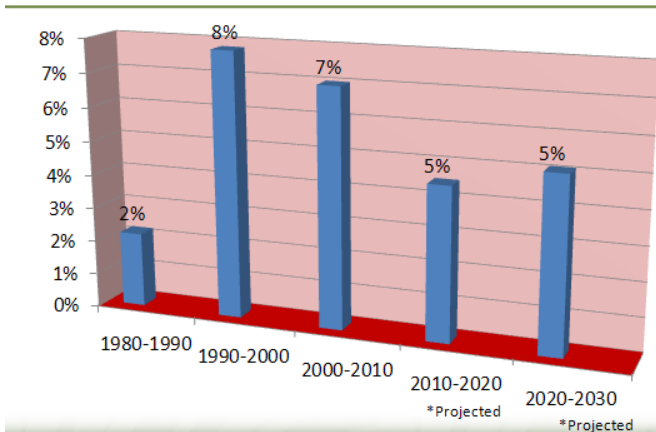
Parish Population Growth



Is Terrebonne Parish growing? Yes, it is. Its official 2010 population of 111,860 represents an increase of a bit more than 15% over the 1990 population (96,982). If the parish were to continue to grow at this pace, then its population by 2030 would be around 129,000. However, the indications are that the parish will grow only at a little more than half this rate over the next twenty years, ending with projected 2030 population of approximately 122,250. This conclusion is based on U.S. Census Bureau population projections (Low Series) for Terrebonne Parish. For this analysis, the Low Series was used because at the time these projections were done, the 2010 census figures were not available. The Census Bureau Low Series projections for Terrebonne for the year 2010 were very close to the official population given for the parish in 2010. The projected number was within less than one percent of the actual number. So, yes, Terrebonne Parish is expected to continue to grow over the next 20 years, but at a slower rate than the last twenty years.



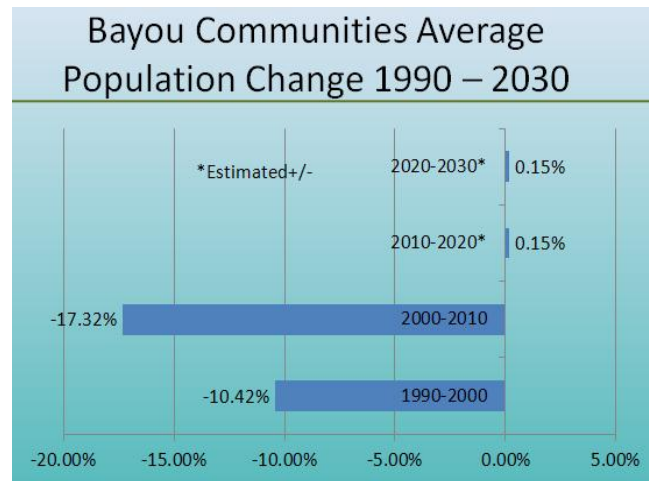
Percentage Growth



Any number of plausible reasons, or combination of reasons, could be offered for this period of slower projected population growth. It has been documented that over the last 20 years, there has been an in-parish migration of population from the southern reaches of Terrebonne to the higher ground in north Terrebonne Parish. Some of the bayou communities have lost as much as 20% or more of their pre-2010 populations to areas of north Terrebonne such as the City of Houma, Schriever, and Gray, areas of the parish less susceptible to storm-related flooding (but not totally immune to this prospect). In this respect, perhaps, our beautiful bayou communities have become less attractive to many outsiders looking to relocate to Terrebonne Parish on a permanent basis. Living in these areas is still possible, but getting to be more expensive as new homes are required to elevate to the base floor elevation height, and the loss of commercial outlets forces residents to travel inconvenient distances for all but the very barest of essentials and services that can be supplied by convenience stores. Average population change in Terrebonne's bayou communities 1990 to 2030 is shown below. It is hoped that population loss in these communities can be halted over the next twenty years.

On the other hand, of course, economic factors

could cause Terrebonne to become much more attractive and bring in new residents to take advantage of the employment opportunities available. This could bring about population growth in excess of projections and create demand for new housing in the northern part of the parish in particular.



The dynamics of population growth over the next twenty years in Terrebonne Parish are most interesting and may have the most significant impact on land use in the parish during this period (see box on next page). In a word, Terrebonne Parish (if projections are accurate) will grow *older*. Over the next twenty years, the 65+ years age cohort is projected to grow by 51%, and this group will be an increasing segment of the total population (from 11% in 2010 to 16% in 2030). No other population cohort is projected to exhibit similar characteristics.

For example, the 0-19 population group over the next 20 years, will increase by 4%, according to projections, in this time period, but will decrease as a percentage of the total population (from 29% in 2010, to 27% in 2030).

In addition, females generally of childbearing age (20-44 population cohort) are projected to decrease over the next 20 years by 4% and



decrease as a percentage of the total population and as a percentage of all females. This may indicate that household sizes could see a slight decline over the next 20 years.

Land Use "Drivers"

- Intra-parish population shifts
- Changes in parish population composition next 20 yrs:
 - 0-19 cohort: increasing by 4%; but steadily decreasing % of total pop. (29% to 27%)
 - Females 20-44 cohort: decreasing by 4%; decreasing as % of total pop. and as % of all females
 - 20-64 cohort: increasing by 2%; but steadily decreasing % of total pop. (60% to 56%)
 - 65+ cohort: increasing by 51%; and increasing % of total pop. (11% to 16%)
 - Total parish population expected to grow about 8% next 20 years (previous 20 yrs. @ 15+%). Fastest growing segment next 20 years: SENIORS

The general working-age population group (men and women 20-64 years) should see a slight increase of about 2% over the next 20 years, but is projected to steadily decrease as a percentage of the total population from 60% in 2010, to 56% in 2030.

Although the parish population is expected (projected) to increase by about 8% over the next 20 years, its rate will be much less than the growth exhibited during the previous 20-year period (15+%). What is astounding—and what is expected to have land use implications for the next 20 years—is the projected growth in the number of senior citizens.

In general, seniors (those born between 1946 and 1964, the so-called "Baby Boomers") tend to exhibit or embrace changing lifestyles. As they age, they appear to be looking for greater convenience, ease and walkability in their neighborhoods, and are much more comfortable with higher densities. Suburban subdivisions and lifestyles are not their first choice. However, whether these characteristics will also reflect

Terrebonne's "Baby Boomer" population is an open question at this point. Cultural factors may come into play here.

In many of these respects, the changing lifestyles of seniors seem to mirror that of the so-called "Generation Y" population group (born between 1981 and 2000). This group is less dependent on the automobile by choice (where choice in transportation modes is viable), are more comfortable with higher densities, are more "urban" in choosing where they would prefer to live and work, and are much less interested in "traditional" homeowner chores than their parents. This group, as well, could influence housing markets over the next 20 years in the parish.

All this should be tempered with a caveat, however. The lifestyle descriptions of Baby Boomers and the Gen Y population group presented above are representative of these groups in general. These groups in Terrebonne Parish, however, may exhibit different characteristics or variations on the lifestyle characteristics described above based on unique cultural considerations and traditions. Nevertheless, as time goes on, it would be wise to revisit these population factors in the parish since they could have implications for land use decisions throughout the parish.

Another area concern relative to population figures for the Parish had to do with counts of migrant workers. Most of these are skilled workers and are employed in the marine fabrication and shipbuilding industry in Terrebonne Parish. Employers appear to have seen to the housing needs of these temporary workers. Nevertheless, an accurate count by census enumeration district should be developed to determine bolster a future comprehensive plan update.





Terrebonne Parish 2010 Existing Land Use

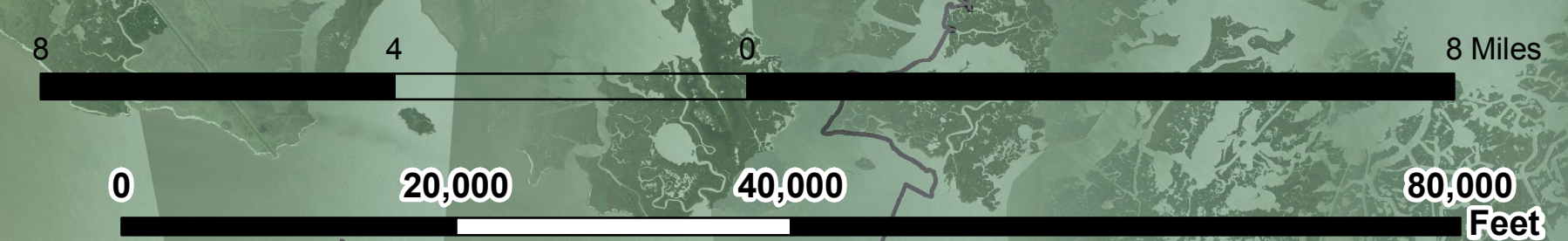


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Note: Existing 2010 Land Use Data provided by Providence Engineering

- EXISTING 2010 TERREBONNE LAND USE**
- NEW ROADWAY OR REALIGNMENT
 - New Bridge
 - <all other values>
 - Residential
 - Multi-Family Residential
 - Commercial/Office
 - Industrial
 - Public/Recreation
 - Mobile Homes
 - Agricultural
 - Vacant/Open
 - Environmentally Sensitive



LAND USE TRENDS and NEEDS TO 2030

How much additional “new” land will the parish require to meet development needs over the next 20 years? At the bottom line, the answer to this question is driven by population growth, although population can “re-defined” by a number of related factors such as housing, employment, public facility and recreation space needs, educational space needs and similar needs. Land use patterns in the parish are easy to understand: development has taken place on the higher ground in the parish and along the bayou ridges. See existing land use map included in the cover sleeve. What is fairly certain over the next twenty years is that land use development patterns will be follow historic patterns.

Actually, through use of a land use model, additional land use needs have been projected for this Comprehensive Plan Update, a methodology that has never been used before in Terrebonne. The chief advantage is that the land use model, “*Planner’s Estimating Guide*,” developed by Arthur C. Nelson, FAICP, of Virginia Polytechnic Institute and State University, provides a much more objective way to development projected land use needs to the planning horizon (2030 in this case). It is also an adaptable and flexible methodology. The chief disadvantage is that the first iteration of the model’s output is almost never quite correct or reasonable. This is so because input variables usually need a bit of “tweaking,” and the model has built-in default values for such things as recreation space standards which must be understood and overridden manually in a place such as Terrebonne with its vast amounts of open, environmentally-sensitive acreage which can serve to meet the need for recreational space in the community.

Regarding the need for “tweaking,” this model

requires a considerable amount of input data, not all of which is readily available, or available in the required format, or even available at all. In some cases, reasonable estimates have been used because the data could not be obtained, or did not exist. Also, the input of the required data is very time consuming even when it is readily available, but even more so when it must be developed from third-party sources (when it is received at all), or searched out from various data sources, not all of which are up-to-date. Nevertheless, these problems were overcome and an output was obtained from the model.

Like any model, however, it must be calibrated to ensure that its output is reasonable. In this case, due to considerable time constraints, this was largely an intuitive exercise. However, with the assistance of members of the Steering Committee and staff of the TPCG Planning & Zoning Department, a deeper understanding of the model’s output was reached and the projected land use needs provided here for the next 20 years are reasonable, if not generous in some cases.

As with any projection, the underlying assumptions as well as “conditions on the ground” can change before the planning horizon is reached, or even in a shorter period of time. For this reason, it is important for the Planning & Zoning Department, along with the Planning Commission, to revisit this plan and its land use model output, measuring such output against real-world data every five years or so.

HOW MUCH LAND IS ENOUGH?

In attempting to answer this question (through the model’s output, primarily), a more important question must also be answered: When will we run out of developable land in Terrebonne Parish? This is a very legitimate question given that more



than 90% of Terrebonne's land area is classified as Environmentally Sensitive. This represents a substantial amount of land that cannot be developed very easily or inexpensively in the traditional sense. Environmentally Sensitive land does have other uses, however, but buildings or structures and access are severely limited by the nature of this land itself, and by the additional layers of mitigation and permitting that are required.

What is left for development? How much has already been used? The answer to these questions will begin with the Comprehensive Plan of 2003, the first of three land consumption scenarios for Terrebonne Parish.

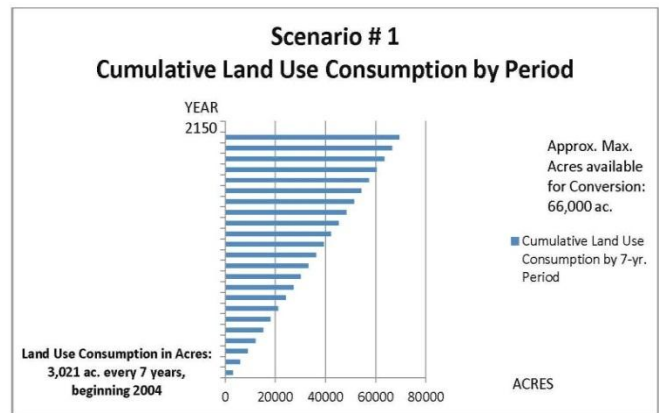
Less than six percent of parish land, therefore, is available for development, approximately 67,583 acres (excluding the small amount in Wellheads). As the parish grows and land is consumed for residential, commercial and other uses, it is expected that this new development will cause land devoted to farming and related uses or classified as Vacant/Open Land, to decline or shrink and this land is converted to urban development.

**TERREBONNE PARISH LAND CONSUMPTION¹ PROJECTIONS
BASED ON PAST AND CURRENT COMPREHENSIVE PLANS**

SCENARIO	PROJECTION SPAN	ACRES CONSUMED PER SPAN	YEAR OF TOTAL CONSUMPTION
Scenario #1	7 Years	3,021	2154
Scenario #2	19 Years	5,832	2229
Scenario #3 ²	20 Years	3,085	2450
¹ Based on approx. 66,000 acres of developable land remaining in Terrebonne Parish.			
² Based on land use model described and used in this chapter.			

Land Consumption Scenario #1

Extensive field work was performed for the 2004 planning effort and, coupled with aerial mapping/GIS, a detailed picture of land use in the parish emerged. According to the land use data in the 2003 plan, land classified as Environmentally Sensitive comprised approximately 91.1% of the total land in Terrebonne Parish. The developed land in the parish, excluding land classified as Agricultural, or Vacant/Open Land, or Wellheads, comprised 3%; and Vacant/Open Land, Agricultural, and Wellheads comprised 5.89%.



Based on analysis undertaken for this update, this is indeed the case. By 2010, the base year for this comprehensive plan update, residential, commercial, and industrial land uses, among others, had increased noticeably, but acreage classified as Agricultural had declined by nearly three percent. In addition, Vacant/Open Land had also declined, but by 5.4%. In 2010, Agricultural (25,564 ac.) and Vacant/Open Land (38,998 ac.) classifications accounted for about 5.61% of parish land. In 2003, the comparable figure was 5.87%.

What does this mean for the future of the parish? If the rate of absorption of Agricultural and Vacant/Open Land classifications were to continue into the future without change, meaning that approximately 3,021 acres of these types of land were to be converted to other uses (residential, commercial, industrial, etc.) every 7

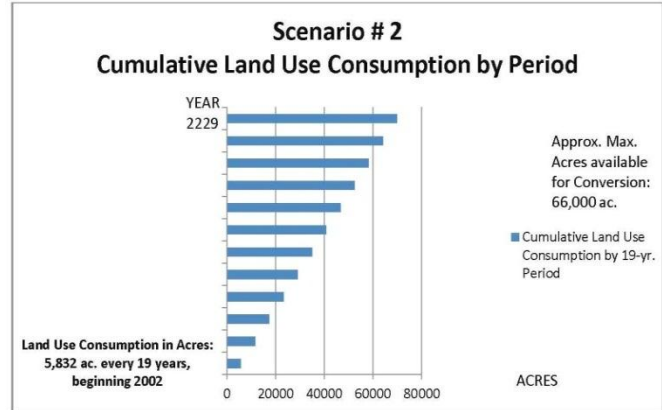


years (2004 to 2010, beginning with 2004), the parish would have enough developable land to accommodate its growth needs for about 150 years, or through the year 2154, give or take a few years. However, under this scenario, land consumption may be overstated a bit due to the fact that the twenty year period ending in 2010 exhibited population growth considerably higher than what is projected for the next twenty year period, ending in 2030. This seems to account for the faster rate of land consumption in the 2003 plan.

There are a number of factors, however, which could cause the rate of land absorption to slow down, extending the “day of reckoning” well beyond 2154. These include a slower rate of population growth, a shift to slightly higher single-family residential densities, increased multi-family developments, more infill development at higher densities, and more mixed use developments, just to name a few.

Land Consumption Scenario #2

The 2003 comprehensive planning effort made land use projections through the year 2020 with a planning horizon of approximately 19 years (2002 to 2020). The Future Land Use Table 2-1 (page 2-23) contained in the 2003 plan shows that for this period, Agricultural and Vacant/Open Land use classifications will decline by about 5,832 acres. If this rate were to hold for the planning period, and the plan’s underlying assumptions and population projections were valid for the same period, Terrebonne would possibly consume all of its developable land in about 220 years, sometime around the year 2,220 or so.



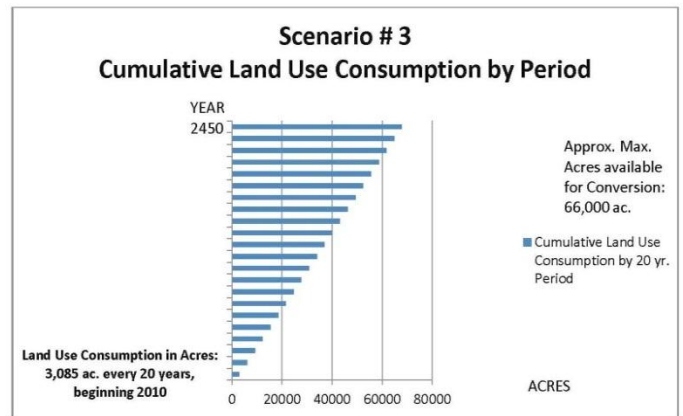
The model employs a series of baseline population and employment data tables which drive many of the subsequent land use and facility estimation output tables elsewhere in the workbook. All of the inputs are fairly detailed. Model documentation, due to its extensive nature, has been given to the TPCG Planning & Zoning Department.

The rest of the model's inputs deal with residential land use baseline conditions, employment-related land use needs, functional population adjustments for public facilities, public facility space and land use needs, educational facility space and land use needs, water and wastewater utility demand and land use needs, summary land use needs and market factor adjustments for land use, capital facility cost estimates, and, change impacts on land use of unanticipated development. When all the data inputs have been entered into the model, and after calibration adjustments, the output is a summary of land use needs for the planning horizon, in this case, the year 2030. See 2030 Generalized Land Use Plan in cover sleeve.

Land Consumption Scenario #3

This model has generated a total of 3,085 acres of additional land use needs by the year 2030. If the assumptions used to generate this land use needs figure are correct and hold true over the next twenty years, and assuming that these additional land use needs will cause a like amount of Agricultural and Vacant/Open Land to be converted to other uses, Terrebonne Parish has enough developable land to last well more than four centuries (438 years). While available land in the parish is actually not "unlimited" in a strict sense, it is easy to view such a large span of time in such terms from a practical standpoint. After all, this rate of land consumption is sufficient to handle the land use needs of the next 17

generations or so of Terrebonne Parish families and inhabitants.



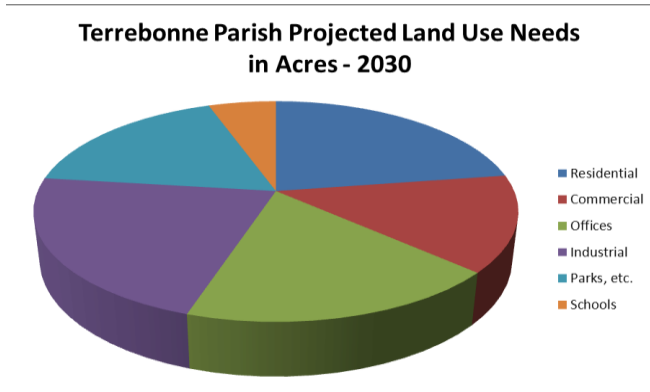
However, the same caveats enumerated above also apply here, and because of the possibility of change—which is one of the few constants in life—the Planning Commission should thoroughly review this plan and its assumptions at least every five years and make adjustments as necessary.

Additional land use needs in the parish over the next twenty years as per the land use model are the following:

- Residential: 698 acres
 - Single-family residential: 640 acres
 - Multi-family residential: 58 acres
- Commercial/Retail: 435 acres
- Office/Government offices: 563 acres
- Industrial: 678 acres
- Parks / Open Space / Trails / Public Facilities / Water-Wastewater capacity: 545 acres
- Public/private schools: 166 acres

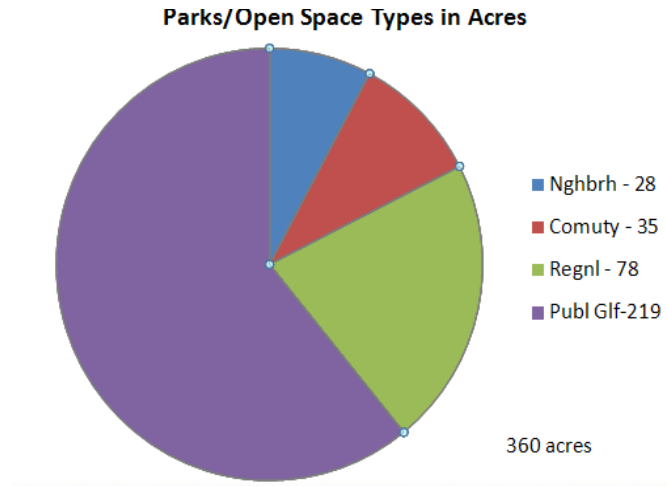


**TOTAL NEW ACREAGE PROJECTED BY 2030:
3,055 acres**



Source: *Planner's Estimating Guide* Land Use Model

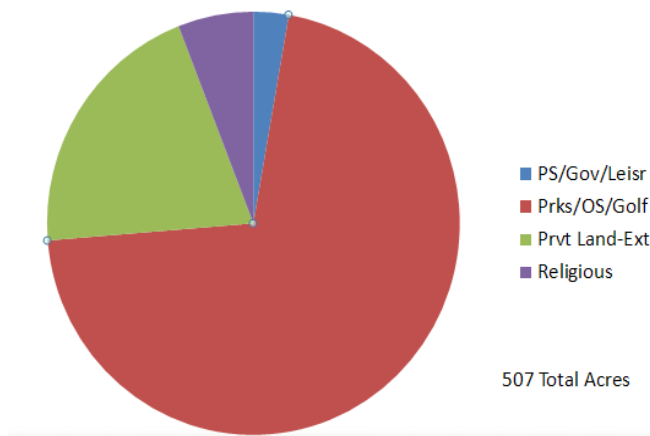
In a parish with what could be considered a super abundance of open space, the land use model indicates well more than 500 acres of such space over the next twenty years. To better understand this, the separate components of this acreage are explained graphically below.



Of the 360 acres projected for this sub-category of land use, most of it is consumed by the public 18-hole golf course, which Terrebonne Parish does not have at this time. Based on national standards, the land use model is projecting the need for one within the next 20 years.

Overall, in the next twenty years, land use development in Terrebonne Parish will follow the "traditional" patterns and will look similar to what is shown in the Future Generalized Land Use Plan contained in this chapter.

20-yr. Projected Parks/Open Space in Acres



Of the 507 total acres assigned to the Parks/Open Space land use category over the next 20 years, about 71% is projected to be consumed by Parks/Open Space/Golf land uses. A further breakdown of this particular land use category is warranted, since this appears to be a disproportional amount of land assigned to these uses within this overall category.

REFERENCES

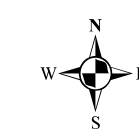
U. S. Census Bureau, 2010 Census and Population Projections

PLANNER'S ESTIMATING GUIDE: Projecting Land-Use and Facility Needs. Arthur C. Nelson, FAICP. Planners Press. Chicago. 2004.





Terbonne Parish 2030 Generalized Land Use Plan



Prepared by:



Note: 2030 Generalized Land Use Data provided by Providence Engineering

TERREBONNE LAND USE 2030 GENERALIZED

- MAJOR STREET PLAN
- NEW ROADWAY OR REALIGNMENT
- New Bridge
- Residential
- Multi-Family Residential
- Commercial/Office
- Industrial
- Public/Recreation
- Mobile Homes
- Agriculture
- Vacant/Open
- Environmentally Sensitive

