

The Economic Impact of the Upper Highland Lakes of the Colorado River



Fall 2012

Prepared for
Burnet County & Llano County



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About this Report

In a joint effort to measure the contribution of the upper Highland Lakes to the regional and state economies, Burnet and Llano Counties retained a project team to perform an economic impact analysis. The project team of TXP, Inc., Concept Development and Planning, LLC, and Diverse Planning and Development conducted the assessment for Burnet and Llano Counties. A steering committee comprised of stakeholders from Burnet and Llano Counties managed the overall process.

The economic impact study includes an analysis of demographic, economic, infrastructure, and public policy related to the upper Highland Lakes of the Colorado River. It also incorporates public input from a range of stakeholders including residents, landowners, employers, land developers, and elected officials. The project team prepared this report with the intent of accurately describing the current situation as well as forecasting the long-term implications for the area.



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Executive Summary

In 2011, Burnet and Llano Counties formed a partnership to study the economic implications of the Upper Highland Lakes on the two-county region. Located along the Colorado River, both counties have a strong agricultural and ranching sector combined with tourists seeking water-based recreational opportunities. Citizens and public leaders in the region are increasingly concerned about challenges and threats to the economy created by the ongoing drought and changing water levels. The tourism sector is the largest employer in the region with visitors spending millions of dollars each year at hotels, restaurants, and shops. In addition, the price premium waterfront properties command creates additional local property tax revenue without a corresponding increase in public services. There was not an existing report or dataset that outlined the baseline economic impact of water-related visitor spending on Upper Highland Lakes nor the broader long-term community implications. This report will create a baseline for both counties.

Burnet and Llano Counties retained a project team to perform an economic impact analysis. The project team of TXP, Inc., Concept Development and Planning, LLC, and Diverse Planning and Development conducted the assessment for Burnet and Llano Counties. A steering committee comprised of stakeholders from Burnet and Llano Counties managed the overall process.

The study area for the project included Burnet and Llano Counties as well as the properties nearby Lake Buchanan, Inks Lake, Lake LBJ, Lake Marble Falls, and Lake Travis (only the portion in Burnet County). To provide additional context, specific information for individual lakes and communities are included.

Most would agree that the prolonged drought has created negative conditions for the upper Highland Lakes. A baseline dataset that quantifies a normal lake level year is not available to compare against another period. It is difficult for residents, stakeholders, and policy leaders to discuss and recommend policy changes that improve the situation using estimates and anecdotes. This is especially true when an underlying assumption is that normal water levels will quickly return. It is also unthinkable to many that the constant level or pass through lakes would face water fluctuations similar to Lake Buchanan and Lake Travis.

The project team identified the following measures as those that most clearly illustrate the economic impact of the Colorado River on the economy, including:

- Out-of-town visitors drawn to the area's lakes, rivers, and natural resources who spend millions of dollars each year

- Real estate premiums that properties adjacent to the Upper Highland Lakes command relative to countywide averages
- Public sector sales tax revenue tied to lake-related real estate and visitor spending
- Long-term growth trends following past droughts and future implications

Upper Highland Lakes Economic & Demographic Context

- Over the past two decades, communities in the region adjacent to the lakes have been the fastest growing in the two-county area. Since 2000, lake adjacent properties have also captured the majority of new homes built in the Upper Highland Lakes Region. Nearly three-quarters of all homes built in the two counties in the past decade were within two miles of the lakes.
- The combination of affluent retirees and second homeowners has generated a substantial amount of property tax revenue for local entities, but without the typical demands for services associated with full-time residents.
- Hotel occupancy tax revenue generated by properties in the Upper Highland Lakes Region more than doubled since 2000. Over 81.1 percent of Burnet and Llano Counties accommodation and lodging businesses are within two miles of the lakes.
- In 2011, direct spending by visitors to Burnet and Llano Counties resulted in the following:
 - \$161.3 million in direct economic activity
 - \$58.9 million in earnings for employees and business owners
 - 3,125 jobs (or 25.9 percent of total regional employment)
 - \$3.46 million in local tax revenue excluding property taxes
 - \$9.2 million in state tax revenue

Economic Activity & Tax Revenue Attributable to the Upper Highland Lakes

- In the Upper Highland Lakes Region, the properties around the lakes are among the most valuable in the area. Lake-related properties in this region account for just 1.9 percent of the geographic area of the counties, but a disproportionately large 46.7 percent of their total taxable value.

- The average taxable value of a home on the lakes is substantially greater than the countywide averages – ranging from approximately 70 percent higher around Lake Buchanan to more than three-and-a-half times the average home price in Burnet and Llano Counties around Lake LBJ and Lake Marble Falls.
- The proportion of taxable hotel room revenue attributable to lake-related hotel properties is approximately 75 percent of total Upper Highland Lakes Region hotel sector activity. Lake-related hotel activity generates more than \$1.0 million in tax revenue for the State of Texas annually.
- In 2011, direct purchases by lake-related visitors to Burnet and Llano Counties resulted in the following:
 - \$122.5 million in direct economic activity
 - \$45.3 million in earnings for employees and businesses owners
 - 2,454 jobs
 - \$2.6 million in local tax revenue excluding property taxes
 - \$7.0 million in state tax revenue
- The total economic impact of lake-related visitor spending in the Upper Highland Lakes including the multiplier effects supported:
 - \$185.5 million in total economic activity
 - \$81.7 million in earnings for employees and businesses owners
 - 3,648 jobs

Long-term Low Lake Level Implications for the Upper Highland Lakes Region

- The Highland Lakes community's overwhelming concern is that overall economic activity in the region will not return to its pre-drought growth rate because of the prolonged low lake levels. Public workshop participants feared that many homeowners will move once the water levels rise and home values rebound to pre-drought levels.
- There are 5,799 undeveloped, lake-related acres, with an additional 1,180 underdeveloped acres, in the two counties, suggesting plenty of room for future growth. If the lakes capture their expected share of anticipated regional expansion, the net increase in taxable property value would be \$1.4 billion around the lakes.

- The decline in lake levels corresponds with an immediate drop in visitor spending in the Highland Lakes region. Visitor spending fell 6.4 percent between 2008 and 2009 for the two-county area.
- Given the significant role the lakes and tourism play in the Upper Highland Lakes region, declining business confidence caused by lake level uncertainty could slow long-term growth even if the drought ends. Over half of the business survey respondents indicated that a 10 percent drop in lake levels cause business activity to drop by more than 20 percent.
- Three scenarios were developed to illustrate the range of what might occur to the tourism sector in Burnet and Llano Counties over the next 20 years based on water levels and visitors spending:
 - Visitor Spending – Over 20 years, visitor spending under the Low Lake Scenario (\$209.7 million) is 34.4 percent lower than Baseline Scenario (\$319.8 million).
 - Employment – Travel-generated employment for the Low Lake Scenario (2,645 jobs) is 13.2 percent smaller than Baseline Scenario (3,048).
 - State & Local Tax Receipts – Visitor supported state and local tax revenue under the Low Lake Scenario (\$10.0 million) is 43.7 percent lower than Baseline Scenario (\$17.3million).

The Colorado River and Highland Lakes serve as a major water source for the Texas Hill Country, the City of Austin, and other downstream communities. Every community can articulate their water needs and why uncertainty creates negative consequences. For Burnet and Llano Counties, lake fluctuations, especially long-term droughts, have tremendous negative consequences for the region. Ultimately, all Texas communities will need to work together to meet statewide long-term water needs and ensure overall prosperity. As part of this process, it is important to consider how decisions on water and lake level policy effect long-term growth in the Upper Highland Lakes Region, especially related to overall population and the tourism sector. Changes to long-term tourism sector growth rates not only impact the Burnet and Llano County economies, but the State of Texas also stands to lose millions of dollars in tax revenue over the next few decades.

Introduction

Throughout Texas, the ongoing drought has forced many regions to reexamine the long-term implications of a stable water supply. Policy tools such as land use guidelines over aquifers, rebates for efficient home appliances, and research at state universities to develop alternative ranching and farming methods are designed to reduce water demand while increasing supply. Regardless of location, a region's ability to ensure a stable supply of water is critical to attracting and retaining residents and businesses. According to the Texas Water Development Board's *2012 State Water Plan*, the negative economic implications of inadequate planning could cost the state billions of dollars:

Annual economic losses from not meeting water supply needs could result in a reduction in income of approximately \$11.9 billion annually if current drought conditions approach the drought of record, and as much as \$115.7 billion annually by 2060, with over a million lost jobs.¹

The citizens and elected officials of Burnet and Llano Counties clearly understand the challenges created by the ongoing drought and changing water levels. Located along the Colorado River, both counties have a strong agricultural and ranching sector combined with tourists seeking water-based recreational opportunities. The tourism sector is the largest employer in the region with visitors spending millions of dollars each year at hotels, restaurants, and shops. In addition, the premium in price waterfront properties command creates additional local tax revenue without a corresponding increase in public services.

In 2011, Burnet County and Llano County formed a partnership to study the economic implications of the Upper Highland Lakes on the two counties. Many quantitative and qualitative metrics describe this impact ranging from annual tourism statistics and vacation homes sales to the cost of moving water intake systems for drinking water and negative media coverage. Because the counties are part of the larger central Texas economy, isolating the countywide effects of the drought is difficult. Therefore, the study committee decided to focus on:

- Defining the baseline economic and tax impact of activity related to the lakes
- Examining how lower lake levels might affect the area over the long-term

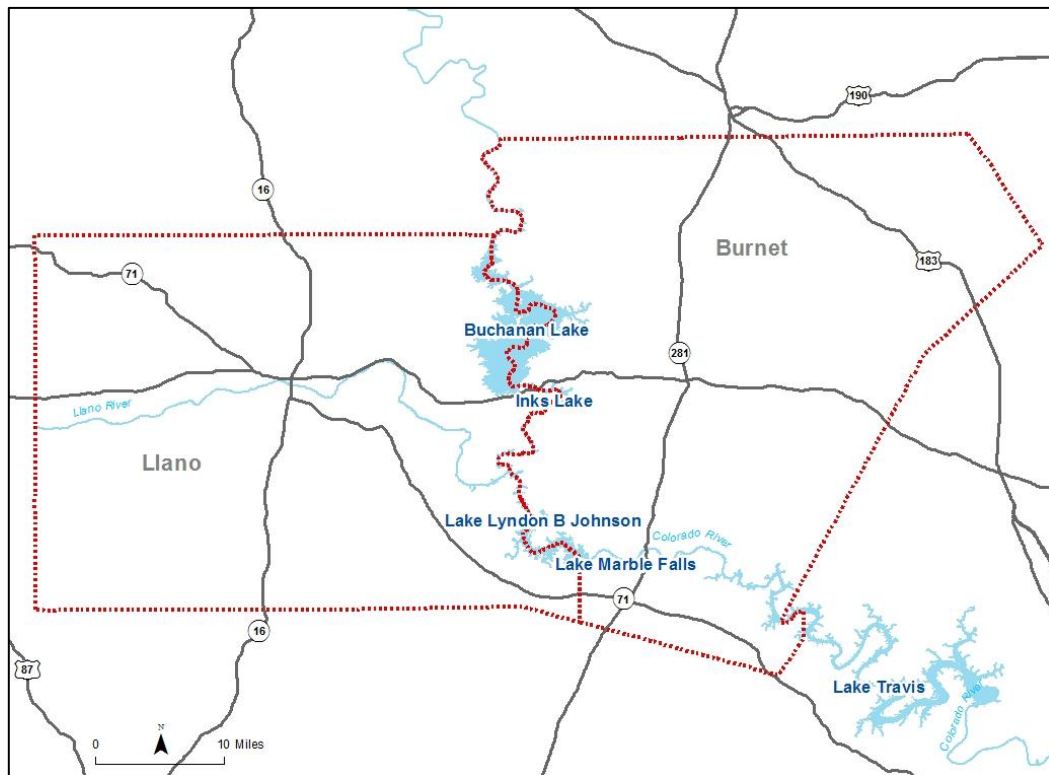
The impacts vary by duration and assumptions, but the effects fall into four categories: real estate activity, out-of-town visitors, public sector tax revenue, and long-term growth trends. While this approach does not capture all of the benefits associated with the Highland Lakes, stakeholders will have information that illustrates the economic implications for the region.

¹ <http://www.twdb.state.tx.us/wrpi/swp/swp.asp>

Upper Highland Lakes Region

Formed by dams on the Colorado River, the Lower Colorado River Authority (LCRA) created reservoirs and related infrastructure to control flooding in the Texas Hill Country. Over time, these reservoirs have attracted thousands of fulltime residents, businesses, and tourists seeking the natural beauty and water recreation. The Highland Lakes are comprised of six lakes including Lake Buchanan, Inks Lake, Lake LBJ, Lake Marble Falls, Lake Travis and Lake Austin. The Colorado River also serves as the primary divide between Burnet and Llano Counties, with many communities developing along each side of the lakes.

Figure 1: Upper Highland Lakes

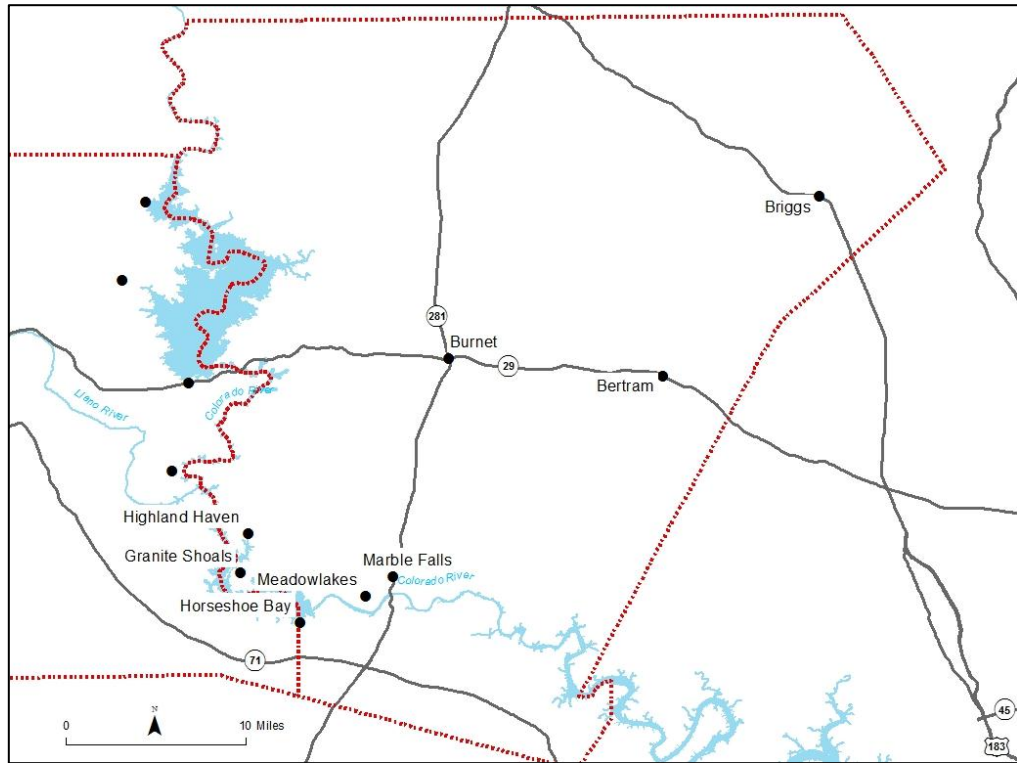


Source: TXP, Inc.

Study Area

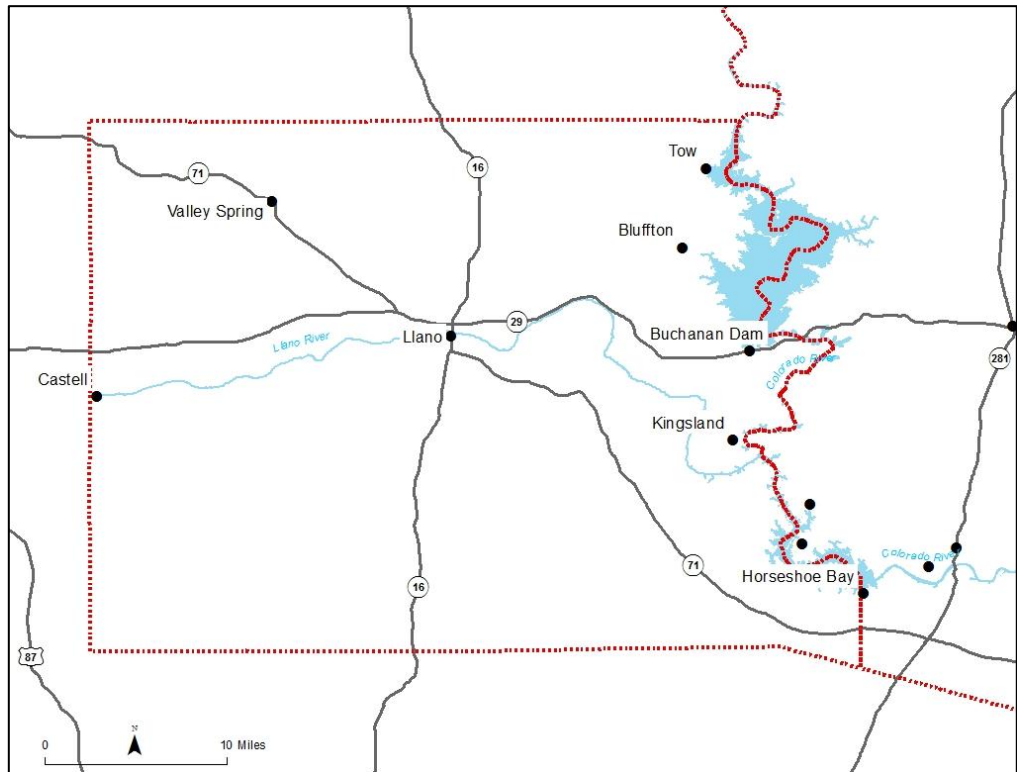
The study area for the project included Burnet and Llano Counties as well as the properties nearby Lake Buchanan, Inks Lake, Lake LBJ, Lake Marble Falls, and Lake Travis (only the portion in Burnet County). To provide additional context, the report presents specific information for individual lakes and communities. Throughout this report, the project team presents information on the following communities: Burnet, Granite Shoals, Horseshoe Bay, Kingsland, Llano, and Marble Falls.

Figure 2: Communities in Burnet County



Source: TXP, Inc.

Figure 3: Communities in Llano County



Source: TXP, Inc.

Methodology & Definitions

In order to measure the lakes' influence, it is critical to properly define the study area, account for external forces, and use a reasonable timeline. Assumptions about long-term lake levels also have a material impact on findings. If one assumes lake levels permanently drop by 50 percent, this yields very different results than assuming a one-year drop of five percent. This study does not forecast lake levels, but instead seeks to isolate the effects in a given year and describe how the lake levels (low or high) translated into tangible impacts. The project team has documented inputs and relied on publicly available datasets when possible as well as described how the assumptions influence the results. The appendix contains supplemental tables and figures.

Baseline Economic Indicators

The overall growth of central Texas has resulted in businesses and residents moving to the area independent of the lakes. The City of Burnet is within close proximity of the much larger Williamson County, enabling some residents who seek a more rural residential setting to commute to high paying jobs in the Austin MSA. It would be inappropriate to assume the lakes drive all growth in the counties. In addition, no state or region was immune to the recent economic recession. Burnet and Llano Counties' construction and real estate sectors are still struggling to adapt to excess inventory and stricter lending standards.

Most would agree that the prolonged drought has created negative conditions for the upper Highland Lakes. A baseline dataset that quantifies a normal lake level year is not available to compare against another period. It is difficult for residents, stakeholders, and policy leaders to discuss and recommend policy changes that improve the situation using estimates and anecdotes. This is especially true when an underlying assumption is that normal water levels will quickly return. It is also unthinkable to many that the constant level or pass through lakes would face water fluctuations similar to Lake Buchanan and Lake Travis.

The project team identified the following datasets as those that most clearly illustrate the economic impact of the Colorado River on the economy, including:

- **Out-of-town visitors** drawn to the area's lakes, rivers, and natural resources who spend millions of dollars each year
- **Real estate premiums** that properties adjacent to the Upper Highland Lakes command relative to countywide averages
- **Public sector tax revenue** tied to lake-related real estate and visitor spending
- **Long-term growth trends** following past droughts and future implications

Excluded from the economic activity categories are some industry sectors such as marinas and boat dealers. Some of this spending is included under the first category of out-of-town visitor spending. Under the presumption that people who rent boat slips need a place to store the boat in the short-term, for example, prices will stabilize over the long-term based on supply and demand. While this delineation was made in the interest of being conservative, it most likely leads to an understatement of the Upper Highland Lakes.

The study does not measure spending by second homeowners and part-time residents. Spending variations based on lake levels are challenging to quantify. A second homeowner has basic maintenance costs that require purchasing supplies and hiring local contractors independent of lake level. The Texas Hill Country also has a variety of thriving communities that are not located along major lakes. Assuming the Highland Lakes disappeared overnight, Burnet and Llano Counties would still attract and retain some level of second homeowners. The more important question is how does uncertainty around lake levels influence future residential real estate and economic development projects over the coming decades?

Public Data Sources

Publicly available datasets were preferred so that the findings and results are updateable. The report contains the following datasets and sources:

- **Texas Workforce Commission's** Quarterly Census of Employment and Wages series
- **Texas Comptroller of Public Accounts** hotel occupancy tax, mixed beverage tax, and sales and use tax permit holders, taxable sales, and tax revenue paid
- **The Office of the Governor, Economic Development and Tourism** out-of-town visitor spending and hotel reports
- **Lower Colorado River Authority** historic lake level data and GIS information
- **Burnet Central Appraisal District and Llano Central Appraisal District** certified appraisal rolls and GIS information
- **U.S. Census Bureau** population and single-family building permit statistics as well as the American Community Survey
- **U.S. Bureau of Economic Analysis'** wage and income statistics

The project team also used a series of supplementary data sources to fill in missing information and to validate preliminary findings:

- **Existing studies** highlighted different aspects of the Highland Lakes, local parks, and visitor spending on the central Texas economy. These studies included the *Lake Travis Economic Impact Report (2011)*, *Economic Contribution of Texas State Parks (2005)*, *Economic Impact Study of Lake Travis Park Visitors to Travis County (2005)*, and the *Economic Impact Analysis Black Rock Park (2011)*.
- **Interviews with local stakeholders** described the opportunities and costs associated with lake-related business, real estate, and tourism. These interviews provided anecdotal support for the story developed from the publically available data and underscored the linkages between lake levels and the overall strength of the Upper Highland Lakes Region's economy.

Geographic Definitions & Terms

The report uses the following terms to describe specific geographic regions, properties, residential units, and businesses:

- **Upper Highland Lakes Region:** the combined Burnet and Llano Counties area
- **Upper Highland Lakes:** refers to Lake Buchanan, Inks Lake, Lake LBJ, Lake Marble Falls, and Lake Travis (only the portion in Burnet County)
- **Water Adjacent Property:** references properties that are immediately adjacent to the Upper Highland Lakes using information from the Burnet Central Appraisal District and the Llano Central Appraisal District
- **Water View Property:** captures parcels that border the lake adjacent properties and are within a quarter-mile of the Colorado River
- **Lake-Related Activity:** the combination of water adjacent properties and water view properties as well as homes and businesses located within this geographic area

History of the Upper Highland Lakes

The Colorado River, the longest and largest river wholly within the State of Texas, feeds the Highland Lakes. The Colorado River flows from Dawson County through 13 counties before it reaches the upper lake in the Highland Lakes chain, Lake Buchanan, and then continues through Central Texas and out into the Gulf of Mexico.

Following the floods of 1900 and 1915 that washed away the first Austin dam and created a floodway one mile wide in Austin, the Texas Legislature created the Lower Colorado River Authority (LCRA) under the Texas Constitution provision Article 16, Section 59. The LCRA was created as a permanent body to effectively manage the Colorado River in Central Texas. It began its operations in 1935, following another flood that washed out the second Austin dam. The repeated collapse of the dams at this location made it clear that additional infrastructure was needed upstream. The Buchanan and Inks dams were completed in 1938, both with hydroelectric capability, which have provided flood control and electric service to Central Texas over the next 75 years.

By 1940, construction of the Buchanan, Inks, Mansfield, and Tom Miller (which replaced the Austin Dam) dams was complete. With four new reservoirs, the LCRA worked with state and federal agencies to promote the lakes for recreation. In 1941 a report commissioned by Max Starcke, General Manager of the LCRA, recommended the Highland Lakes become the promotional theme for recreation development in Central Texas. The report discussed the creation of “sandy beaches in scenic surroundings that would make for ideal bathing.” It further encouraged sailing, picnicking, camping, fishing, hunting and other recreational activities. Throughout the 1940s and 1950s, the LCRA also focused on the promotion of electrical services, conservation, and land rehabilitation in conjunction with its management of the river.

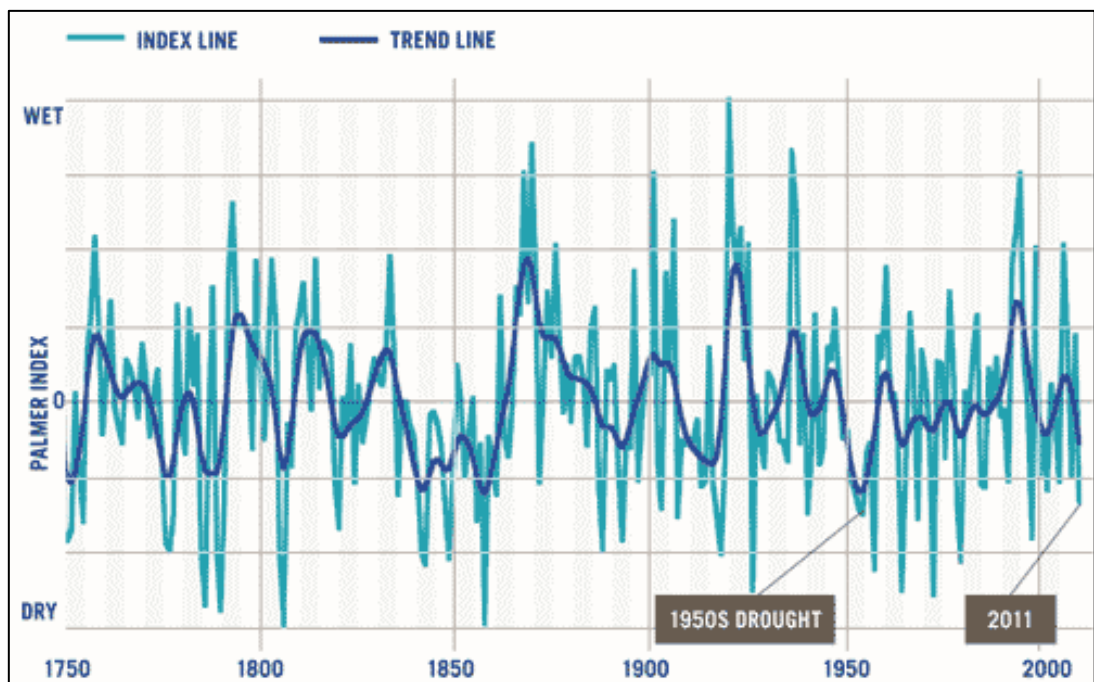
After World War II, the LCRA resumed its promotion of the Highland Lakes as a premier recreational opportunity through continued investment and development around the Lakes. In 1951 the final dams, the Starcke Dam at Marble Falls and the Wirtz Dam at Granite Shoals, were completed. This occurred at the beginning of the decade-long drought; it was at this time that the LCRA began to examine other sources of potable water.

In the 1960s and 1970s, LCRA concentrated on fulfilling the growing need for power generation in Texas with the construction of a number of power plants on the Highland Lakes. In 1971, the Texas Legislature gave LCRA the power to control water pollution and manage conservation efforts associated with the Colorado River and surrounding areas. The 1980's and 1990's saw the expansion of the parks system, the purchase of additional water rights in the lower basin, the sale of electric utility systems to customers, and the development of water management systems.

Historic Water Level Fluctuations

The Colorado River, like many of the streams in central and west Texas, experiences huge fluctuations in flow. With over 700 feet of elevation difference from Lake Buchanan to Tom Miller Dam, it sees a greater drop than the entire Mississippi River and, therefore, runs with high velocity through Central Texas when full. Studies of tree rings have made it clear that Texas also is prone to cycles of drought, some of which are prolonged. The graph below tracks more than two-and-a-half centuries of drought conditions in South Central Texas. The line in lighter blue shows estimated values for the Palmer Drought Severity Index, used to track the occurrence and severity of drought; the darker line tracks the overall trend.

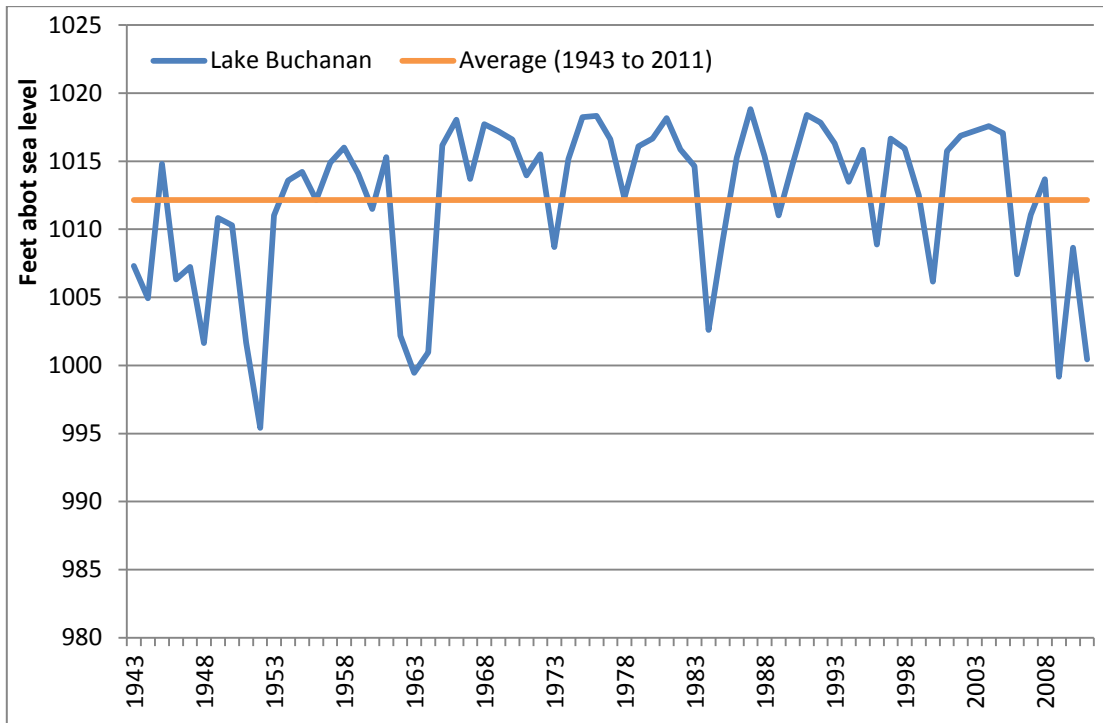
Figure 4: Texas Drought Cycles Over Time



Source: Texas Water Resources Institute, Texas Comptrollers of Public Accounts

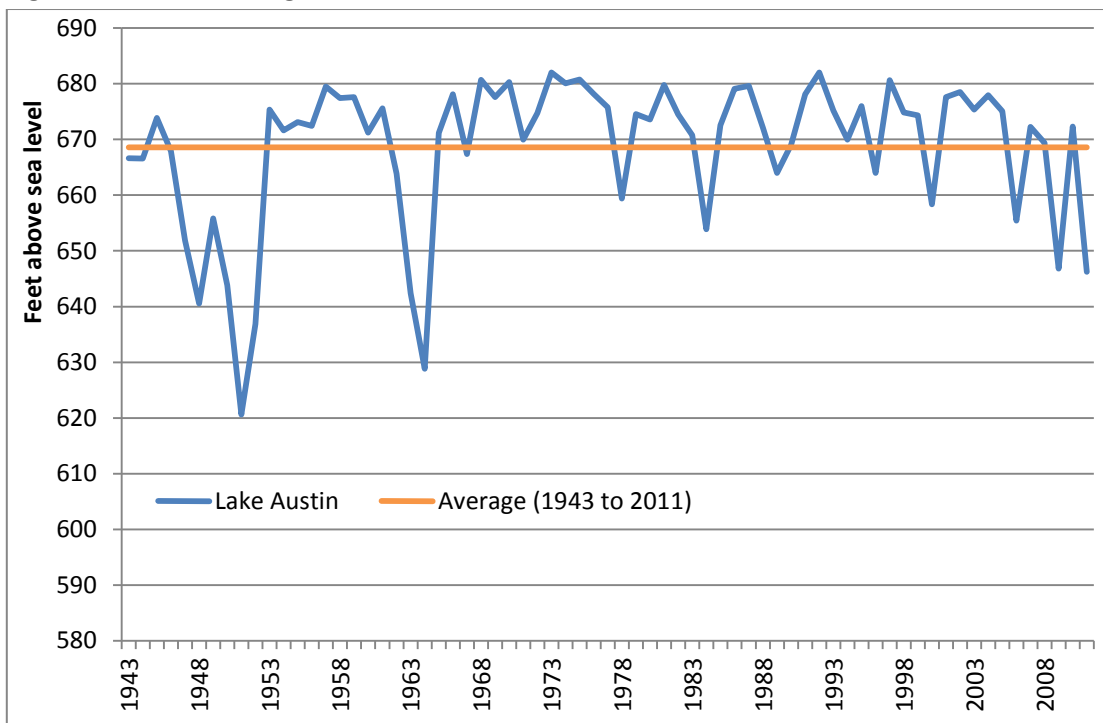
The LCRA has for many years considered Lake Buchanan a storage reservoir and Lake Travis the flood control reservoir with the lakes connecting the two as opportunities to produce power when flow was available. The following figures illustrate the fluctuations in Lake Buchanan and Lake Travis since 1949. It should be noted that the lake levels have been consistently lower in recent years because of the drought that started in 2009 as well as demand by downstream users.

Figure 5: Annual Average Water Level for Lake Buchanan



Source: Lower Colorado River Authority

Figure 6: Annual Average Water Level for Lake Travis



Source: Lower Colorado River Authority

Parks and Marinas

The recreational opportunities offered by the lakes are diverse. Within the context of parks and marinas there are many variations from the traditional park uses such as fishing, boating, bird watching, and hiking nature trails. These amenities make the Highland Lakes an ideal setting for family vacations, family and corporate retreats, as well as day trips and weekend outings. The affordability of these offerings appeals to a wide customer base and attracts visitors nationwide. Many camp and resort operators have “regulars,” families or businesses that plan annual trips over a period of many years.

There are a number of parks and boat ramps in Burnet and Llano Counties surrounding the Highland Lakes, including Burnet County Park, Canyon of the Eagles Nature Park-Lake Buchanan, Black Rock Park, Llano County Park, Inks Lake State Park, Granite Beach, and numerous pocket parks along the lake frontage. There are 13 marinas in the Upper Highland Lakes Region. These marinas represent centers of economic activity. Marinas typically are associated with restaurants, bars, boat repair, fueling, fishing and other water related services and activities. There are 10 marinas on Lake Buchanan and another has a permit, but not operational. These marinas contain approximately 150 boat slips. At this time, those at the northern end of Lake Buchanan are out of the water. There are no marina facilities on Inks Lake or Lake Marble Falls. The three remaining marinas are located on Lake LBJ.

Upper Highland Lakes Economic & Demographic Context

Key Findings

- Over the past two decades, communities in the region adjacent to the lakes are the fastest growing in the two-county area.
- Since 2000, lake adjacent properties represent the majority of new homes built in the Upper Highland Lakes Region. Nearly three-quarters of all homes built in the two counties in the past decade were within two miles of the lakes.
- Accommodation and Food Services, Retail Trade, and Health Care and Social Assistance sectors are the major employment drivers for the Upper Highland Lakes Region. Collectively, these sectors account for 41.8 percent of all workers in the area. By comparison, employment in these three sectors only accounts for 33.5 percent of all workers statewide. These changes reflect the growing importance of lake-related tourism as well as the increasing retiree population.
- The combination of affluent retirees and second homeowners has generated a substantial amount of property tax revenue for local entities, but without the typical demands for services associated with full-time residents.
- Hotel occupancy tax revenue generated by properties in the Upper Highland Lakes Region more than doubled since 2000. Over 81.1 percent of Burnet and Llano Counties accommodation and lodging businesses are within two miles of the lakes.
- Because properties in lake-adjacent communities such as Horseshoe Bay and Marble Falls are well above the countywide taxable property averages, lower lake levels that depress real estate activity have a disproportionately negative impact on county finances. The leveling off in total taxable value coincides with the ongoing drought and low lake levels that began in 2009.
- In 2011, spending by visitors to Burnet and Llano Counties resulted in the following:
 - \$161.3 million in direct economic activity
 - \$58.9 million in earnings for employees and businesses owners
 - 3,125 jobs (or 25.9 percent of total regional employment)
 - \$3.46 million in local tax revenue excluding property taxes
 - \$9.2 million in state tax revenue

Population & Households

In 2010, the population of the Upper Highland Lakes Region was 62,051. Burnet County's population was 42,750 residents and Llano County was home to 19,301 individuals. Over the past two decades, the population of the region has nearly doubled. Between 1990 and 2010, the Upper Highland Lakes Region grew at a compound annual growth rate (CAGR) of 3.0 percent compared to 2.0 percent for the State of Texas. Within the counties, a disproportionate amount of this growth has occurred in lake adjacent communities.

Census block data illustrates the importance of the lake adjacent areas. The U.S. Census Bureau subdivides Burnet and Llano counties into 45 census block groups,² 27 in Burnet County and 18 in Llano County. Of these 45 census block groups, a subset of 20 census block groups overlap with the lake adjacent areas of the counties. These 20 census block groups account for 10.5 percent of the geographic area of the two counties, but are home to 25,000 people or 40.2 percent of total residents.

Over the past two decades, the largest cities or census-designated places in the Upper Highland Lakes Region as well as those with the fastest population growth rates are located adjacent to the lakes. Currently, Kingsland³ and Marble Falls are the two largest communities in the Upper Highland Lakes Region. Granite Shoals, Horseshoe Bay, and Kingsland all more than doubled their resident population between 1990 and 2010. By comparison, the county seats of Burnet and Llano Counties experienced a combined population increase of 40.8 percent over this same period. In 1990, these two cities ranked in the top three for total population in the Upper Highland Lakes Region. These trends demonstrate the demand for residential properties close to the lakes relative to the rest of the county.

The Upper Highland Lakes Region continues to attract a substantial number of retirees and second homeowners. As a result, the area's population is older than the average for the State of Texas. Nearly one-third of all Llano County residents and 17.9 percent of Burnet County residents are 65 years or older, compared with just 10.0 percent of the state population.

The average household size in Burnet and Llano Counties is 2.5 and 2.1 people per household, respectively. These values are lower than the Texas figure of 2.7 people per

² Census block group is a geographical unit used by the US Census Bureau; its geographical size is determined by the population density of the area it describes. It is the smallest subdivision for which the Census Bureau tabulates sample data.

³ Kingsland is a census designated place (CDP). CDPs are delineated for each decennial census as the statistical counterparts of incorporated places. CDPs are delineated to provide data for settled concentrations of population that are identifiable by name but are not legally incorporated under the laws of the state in which they are located.

household, which is to be expected in counties with a slightly older average population. The combination of affluent retirees and second homeowners has the result of generating a substantial amount of property tax revenue for local entities, but without the typical demands for services (e.g., public schools). The net effect is that local school districts such as Llano ISD and Mable Falls ISD are designated by the state as property wealthy; requiring these districts to share their wealth with property-poor school districts across Texas. In 2012, the state recaptured nearly \$20.0 million from these two districts under the "Robin Hood" school finance plan.

Table 1: Demographic Trends for Burnet and Llano Counties

Statistic	Burnet County			Llano County		
	1990	2000	2010	1990	2000	2010
Total Population	22,677	34,147	42,750	11,631	17,044	19,301
Total Households	9,055	13,133	16,511	5,278	7,879	9,008
Average HH Size	2.47	2.53	2.53	2.15	2.13	2.13
Younger than 20 Years	26.7%	26.9%	25.5%	17.8%	17.5%	17.4%
20 to 64 Years	50.8%	55.1%	55.9%	48.1%	51.8%	51.5%
65 years and Older	22.5%	17.9%	17.9%	34.1%	30.7%	29.9%

Source: 1990 Decennial Census, US Census Bureau; 2000 Decennial Census, US Census Bureau; 2010 Decennial Census, US Census Bureau; ESRI

Table 2: Demographic Trends for Cities/Places in Burnet and Llano Counties

City/Place	Total Population			Total Households			Average HH Size in 2010
	1990	2000	2010	1990	2000	2010	
Burnet	3,496	4,735	5,987	1,367	1,661	2,041	2.49
Granite Shoals	1,395	2,040	4,910	609	825	1,709	2.87
Horseshoe Bay	1,656	3,337	3,418	802	1,623	1,702	2.01
Kingsland	2,725	4,584	6,030	1,246	2,103	2,667	2.23
Llano	3,053	3,325	3,232	1,242	1,353	1,354	2.31
Marble Falls	3,776	4,959	6,077	1,472	1,931	2,486	2.41

Source: 1990 Decennial Census, US Census Bureau; 2000 Decennial Census, US Census Bureau; 2010 Decennial Census, US Census Bureau; ESRI

Employment & Labor Force

The total number of employed residents in Burnet and Llano Counties increased steadily over the past two decades, in line with total population trends during this period. There are fewer jobs available in the Upper Highland Lakes Region than there are employed residents. Currently, there are 16,555 jobs based in the two-county region compared to 29,438 working residents. A disproportionate number of employed residents, 58.8 percent, work outside both counties. Due in part to the physical beauty of the region as well as quality of life, employed residents are willing to commute to their jobs or work from home.

Table 3: Employed Residents & County-Based Jobs in the Upper Highland Lakes Region

Year	Burnet County		Llano County	
	Employed Residents	Burnet County Employment	Employed Residents	Llano County Employment
2000	16,540	9,320	7,043	4,081
2001	17,174	9,781	7,134	4,120
2002	18,237	10,472	7,320	4,130
2003	19,146	10,865	7,520	4,085
2004	19,696	11,244	7,515	4,024
2005	19,432	11,075	7,635	4,223
2006	20,397	11,961	7,743	4,303
2007	20,918	12,515	7,810	4,396
2008	21,259	12,665	8,054	4,576
2009	20,988	12,117	7,976	4,326
2010	21,337	12,200	7,851	4,152
2011	21,549	12,362	7,889	4,193

Source: Texas Workforce Commission

For jobs located within Burnet and Llano Counties, the industry breakdown has shifted over the past two decades. The industry sectors of Accommodation and Food Services, Retail Trade, and Health Care and Social Assistance are the major employers for individuals working in the Upper Highland Lakes Region. Collectively, these sectors account for 41.8 percent of all workers in the area. By comparison, employment in these three sectors only accounts for 33.5 percent of all workers statewide. The relatively higher concentration of employment in these three sectors reveals the increasing importance of tourism and lake-related activity to the overall regional economy. Existing businesses focus on meeting the needs of out-of-town visitors, retirees, and residents who work outside of the county but chose to live near the lakes. Members of the community whose livelihoods are not directly “lake-related” are able to enjoy a higher quality of life due to the diversity of shops, restaurants, and services supported by these groups.

Real Estate Values & Residential Building Activity

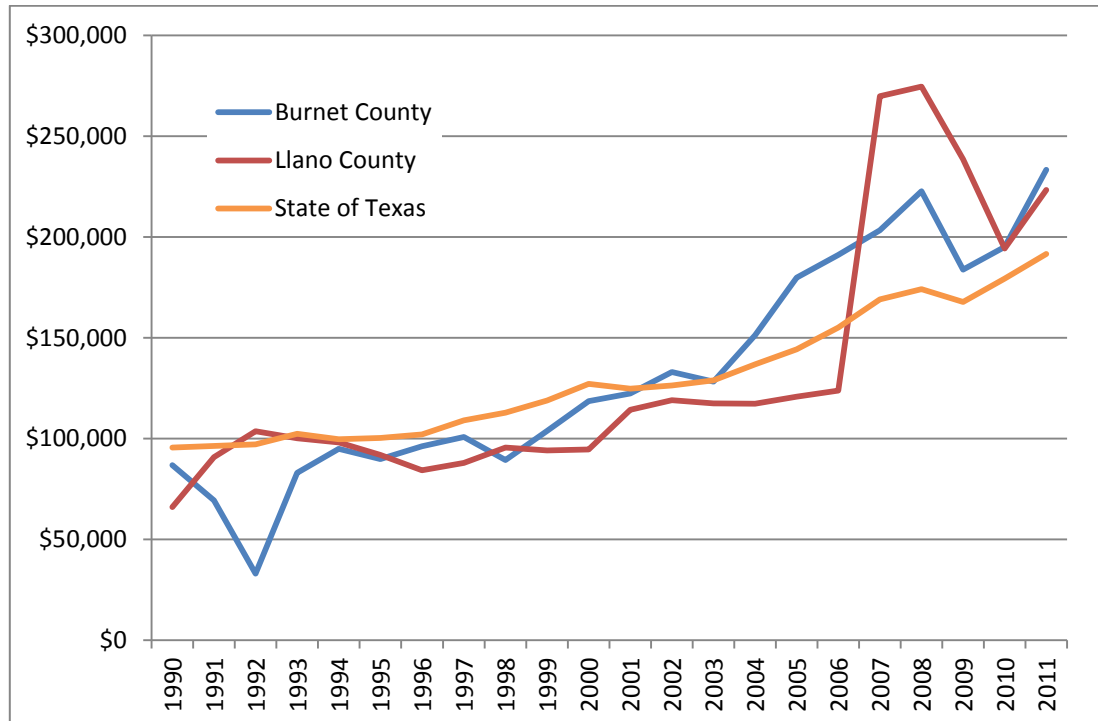
There are approximately 35,000 housing units in the Upper Highland Lakes Region. The 2010 median home value in Llano County was \$150,700 compared to \$137,800 for Burnet County. In 2010, the median home value in Texas was \$123,500. The difference in homes values reflects a premium for properties in Burnet and Llano Counties compared to the state as a whole. Given the difference between working residents and jobs available in the county, employment opportunities are not the primary reason residents locate in the counties.

Table 4: Housing Trends for Burnet and Llano Counties

Statistic	Burnet County			Llano County		
	1990	2000	2010	1990	2000	2010
Total Housing Units	12,801	15,933	20,870	9,773	11,829	14,280
Occupancy Rate	70.7%	82.4%	79.1%	54.0%	66.6%	63.1%
Owner Occupied	6,853	10,286	12,348	4,188	6,372	7,067
Renter Occupied	2,202	2,847	4,163	1,090	1,507	1,941
Median Home Value	\$58,431	\$93,600	\$137,800	\$66,654	\$102,100	\$150,700

Source: 1990 Decennial Census, US Census Bureau; 2000 Decennial Census, US Census Bureau; 2010 Decennial Census, US Census Bureau; ESRI

Figure 7: Average Construction Cost for New Single-Family Residential Units



Source: Censtats Building Permits Data, Census Bureau

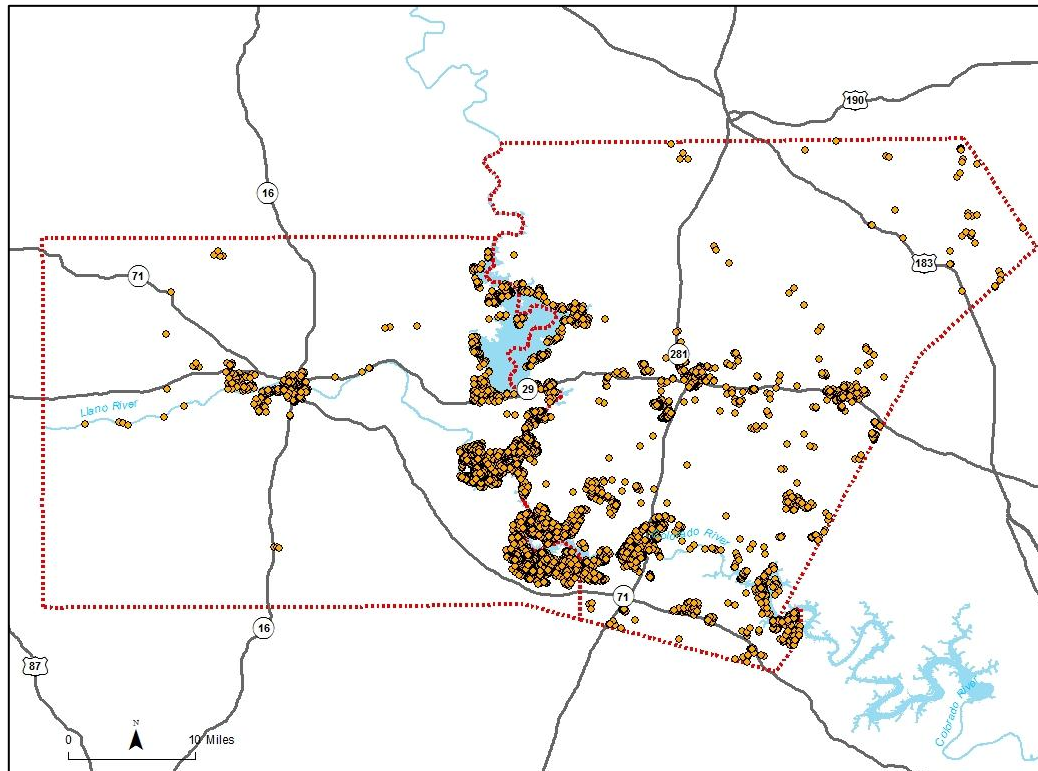
The majority of new homes built in the Upper Highland Lakes Region since 2000 were clustered around the lakes. Nearly three-quarters of all homes built in the two counties in the past decade were within two miles of the lakes. This data indicates the disproportionate share that the Highland Lakes have on the regional housing market. The lake adjacent communities tend to have a higher vacancy rate than the cities of Burnet and Llano, indicating the large number of second homes and vacation rental properties. These homes typically have a higher median home value too.

Table 5: Housing Trends for Cities/Places in Burnet and Llano Counties

City/Place	Total Housing Units			Median Home Value		
	1990	2000	2010	1990	2000	2010
Burnet	1,640	1,813	2,277	\$44,474	\$66,235	\$116,000
Granite Shoals	1,091	1,224	2,467	\$48,333	\$62,284	\$77,100
Horseshoe Bay	2,266	2,773	3,131	\$139,063	\$172,077	\$276,200
Kingsland	2,031	2,803	3,714	\$61,274	\$71,894	\$108,200
Llano	1,474	1,539	1,615	\$46,333	\$55,625	\$85,400
Marble Falls	1,739	2,085	2,823	\$57,933	\$75,962	\$131,000

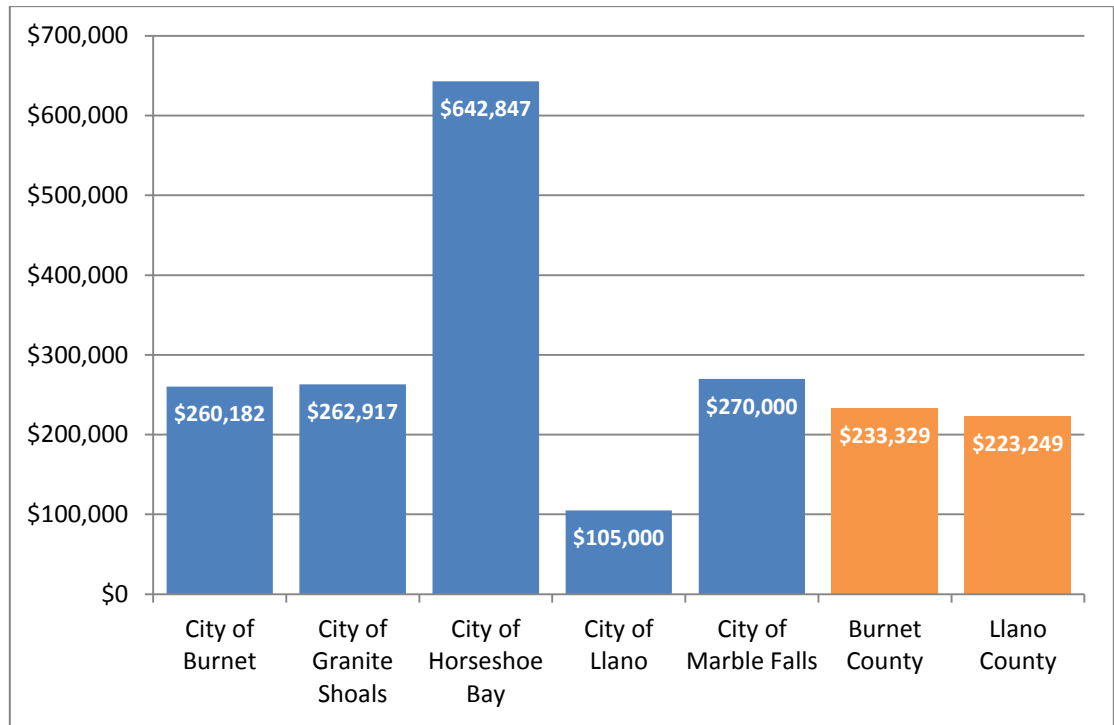
Source: 1990 Decennial Census, US Census Bureau; 2000 Decennial Census, US Census Bureau; 2010 Decennial Census, US Census Bureau; ESRI

Figure 8: New Single-Family Homes Built between 2000 and 2011



Source: Burnet Central Appraisal District; Llano Central Appraisal District

Figure 9: Average Construction Cost for New Single-Family Residential Units (2011)

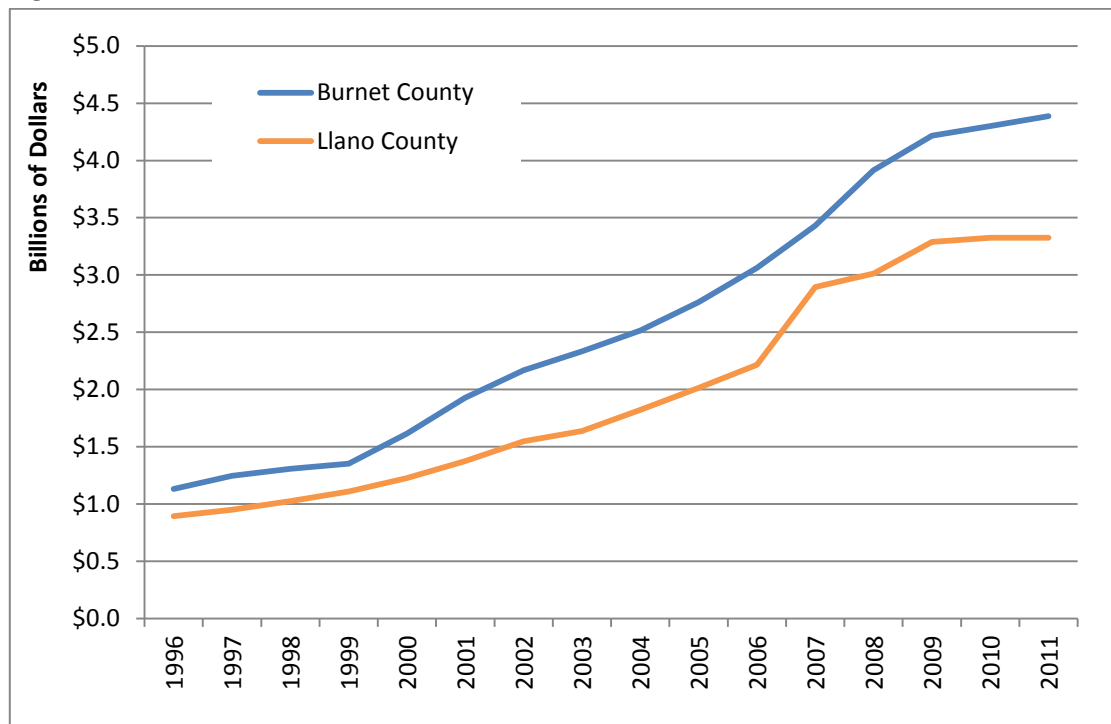


Source: Censtats Building Permits Data, Census Bureau

Property Tax Base & Revenue

Property values in the Upper Highland Lakes Region have grown significantly over the past 20 years. In 2011, Burnet County collected \$16.3 million in property taxes. Llano County received \$9.2 million in property tax revenue in 2011. Approximately 79.0 percent of all county revenue for the two-county areas comes from property taxes. Declines in the average taxable value per home or declining single-family building starts can have a significant impact on the ability to keep tax rates low while offering the services required by residents. Because properties in lake-adjacent communities such as Horseshoe Bay and Marble Falls are above the countywide taxable property averages, lower lake levels that depress real estate activity have a disproportionately negative impact on county finances. The leveling off in total taxable value coincides with the ongoing drought and low lake levels that began in 2009.

Figure 10: Total Assessed Value for Burnet & Llano Counties



Source: County Information Project, Texas Association of Counties

Table 6: County Distribution of the Property Tax Base by Select City/Place (\$Millions)

	Burnet County			Llano County		
	Burnet	Granite Shoals	Marble Falls	Horseshoe Bay*	Kingsland	Llano
Taxable Value	\$263.8	\$292.9	\$484.9	\$1,487.8	\$503.4	\$130.2
% County Total	6.8%	7.5%	12.5%	48.2%	16.3%	4.2%

Source: Burnet Central Appraisal District and Llano Central Appraisal District

*Though Horseshoe Bay's city limits fall in both Burnet and Llano Counties, only the portion in Llano County is included in this table for simplicity.

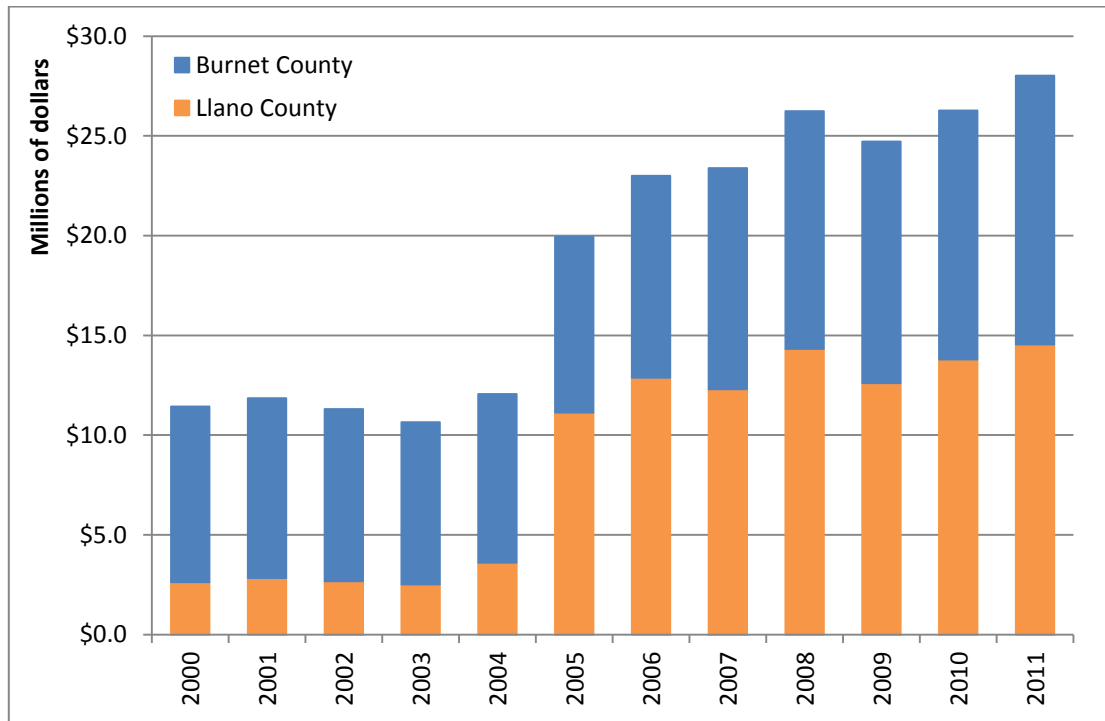
Hotel Occupancy Tax

Hotel occupancy tax (HOT) revenue generated by the Upper Highland Lakes Region more than doubled over the past decade, from \$11.4 million in 2000 to \$28.0 million in 2011. Llano County had the most growth over this period, due in part to the opening of new hotels in the Horseshoe Bay area. The strong growth in overall HOT revenue combined with employment in the Accommodations and Lodgings sector illustrates the importance of the tourism sector in the Upper Highland Lakes Region, as well as the continued demand for hotel room nights over this period.

Currently, there are 525 HOT payers in the Upper Highland Lakes Region; just over one-quarter of these businesses are located in Burnet County and the other three-quarters are in Llano County. Of the HOT paying businesses in the region, 81.1 percent are within two miles of the lakes. This statistic highlights the attractiveness of the lakes for visitors to the region and underscores the importance of proximity to the lakes for the tourist sector.

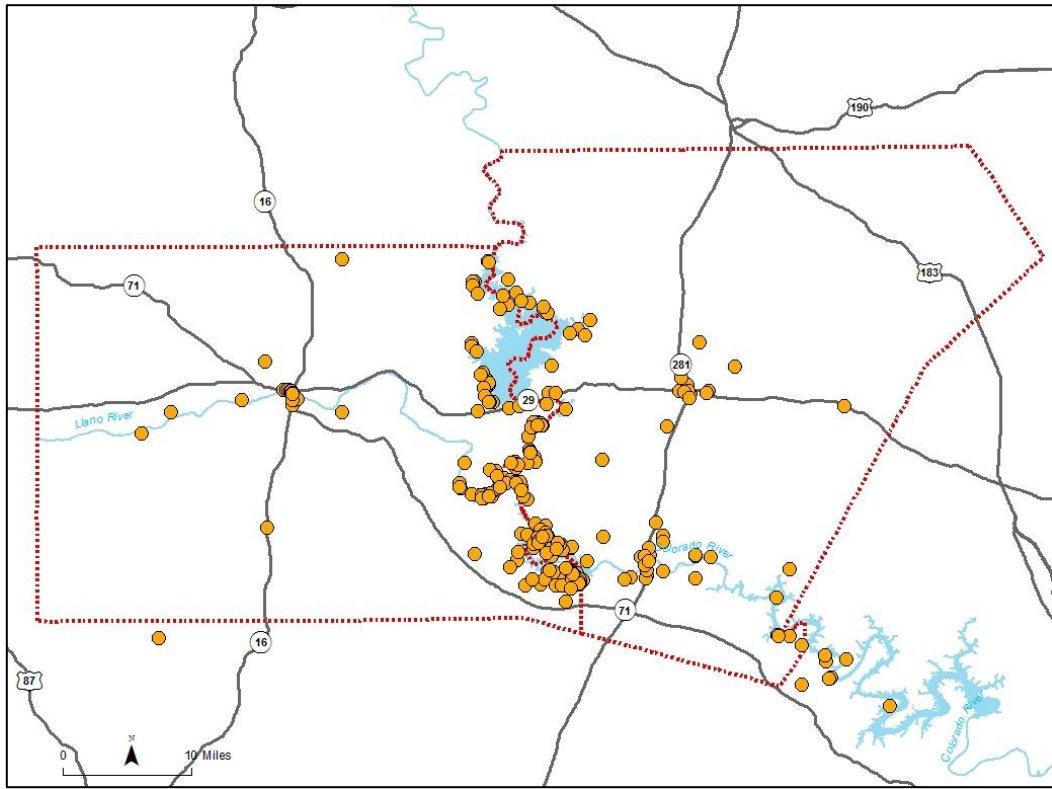
By state law, a tax is imposed on a person who pays for a room or space in a hotel costing \$15 or more each day. Local hotel taxes apply to sleeping rooms costing \$2 or more each day. The current state tax rate is 6.0 percent of the cost of a room. Depending on location, a city or one of the counties also imposes a tax that is used to promote tourism and the convention and hotel industry.

Figure 11: Total Taxable Hotel Revenue from Upper Highland Lakes Region



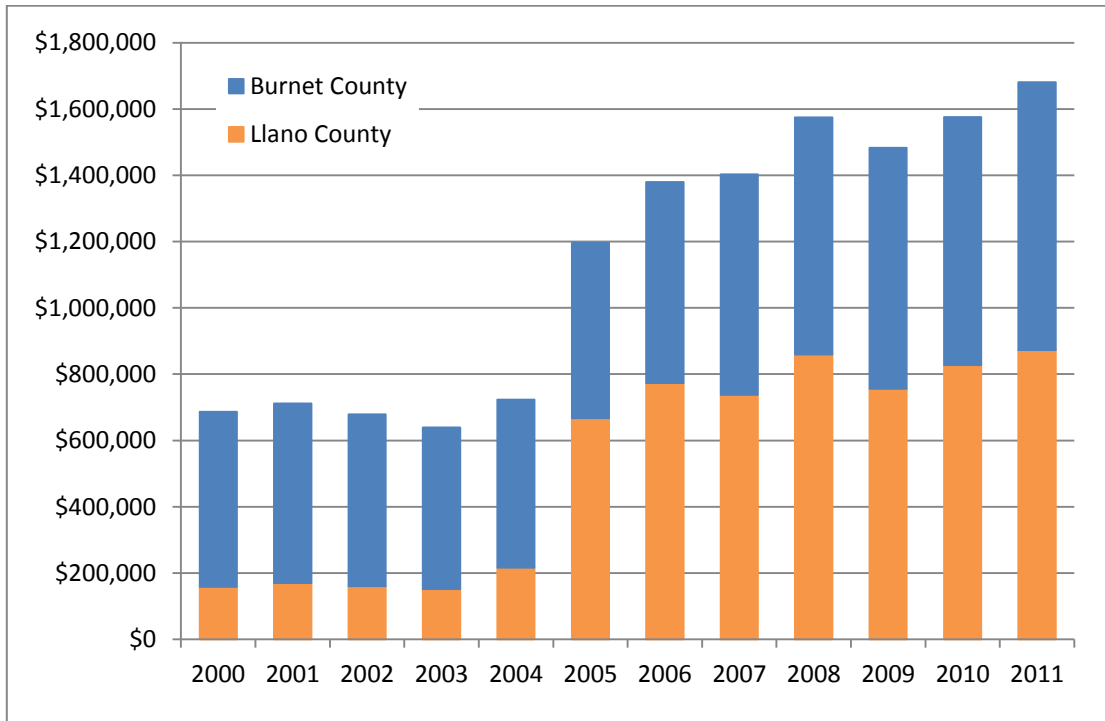
Source: Texas Comptroller of Public Accounts

Figure 12: Location of Hotel Occupancy Taxpayers in Burnet and Llano Counties



Source: Texas Comptroller of Public Accounts

Figure 13: State of Texas Hotel Occupancy Tax Revenue per County



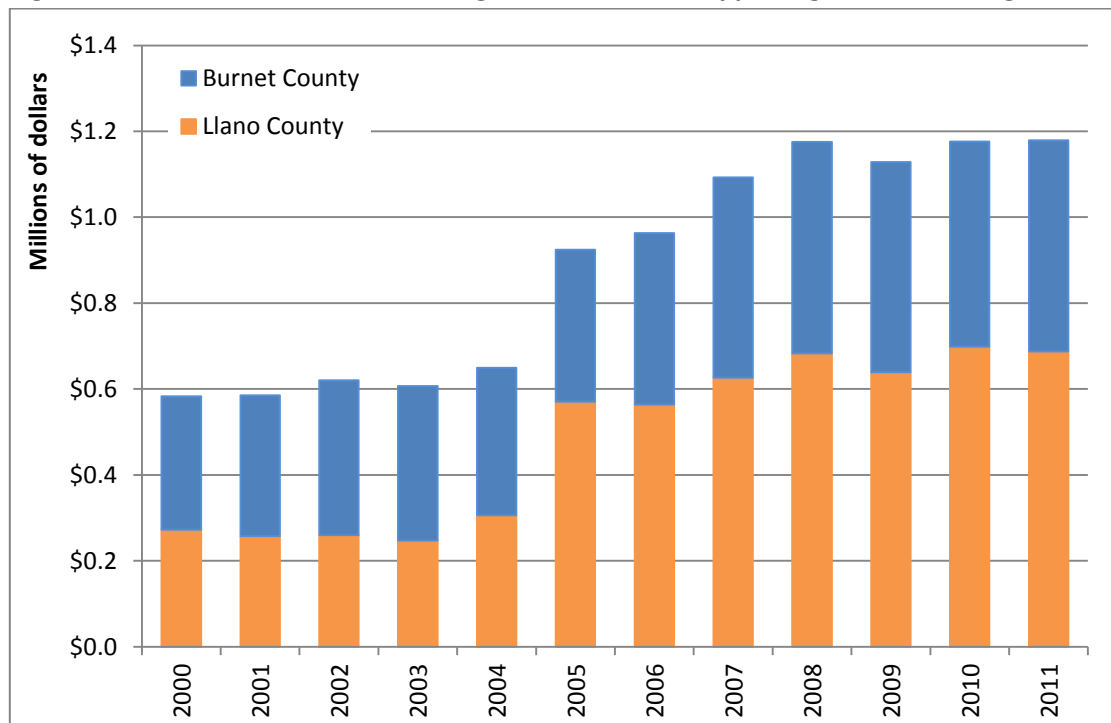
Source: Texas Comptroller of Public Accounts

Mixed Beverage Tax

There are currently 103 mixed beverage tax-paying establishments in the Upper Highland Lakes Region; more than half (65.0 percent) are in Burnet County. For the most part, these businesses are clustered around the lakes and along Highway 281. Approximately 71.8 percent of all mixed beverage permit holders are within two miles of the lakes. Revenue from these businesses has doubled over the past decade, with the strongest period of growth occurring between 2004 and 2006. While not a major source of local or state tax revenue, the rise and fall of the mixed beverage tax tracks HOT revenues – indicating a substantial portion of these sales occur to out-of-town visitors.

By state law, a gross receipts tax is imposed on the amount received from the sale of mixed beverages and from the sale of ice or nonalcoholic beverages that are sold for the purpose of being mixed with an alcoholic beverage and consumed on the premises of the mixed beverage permittee. The current state mixed beverage tax rate is 14.0 percent of gross receipts.⁴ A portion of this revenue is shared with either the city or county based on location.

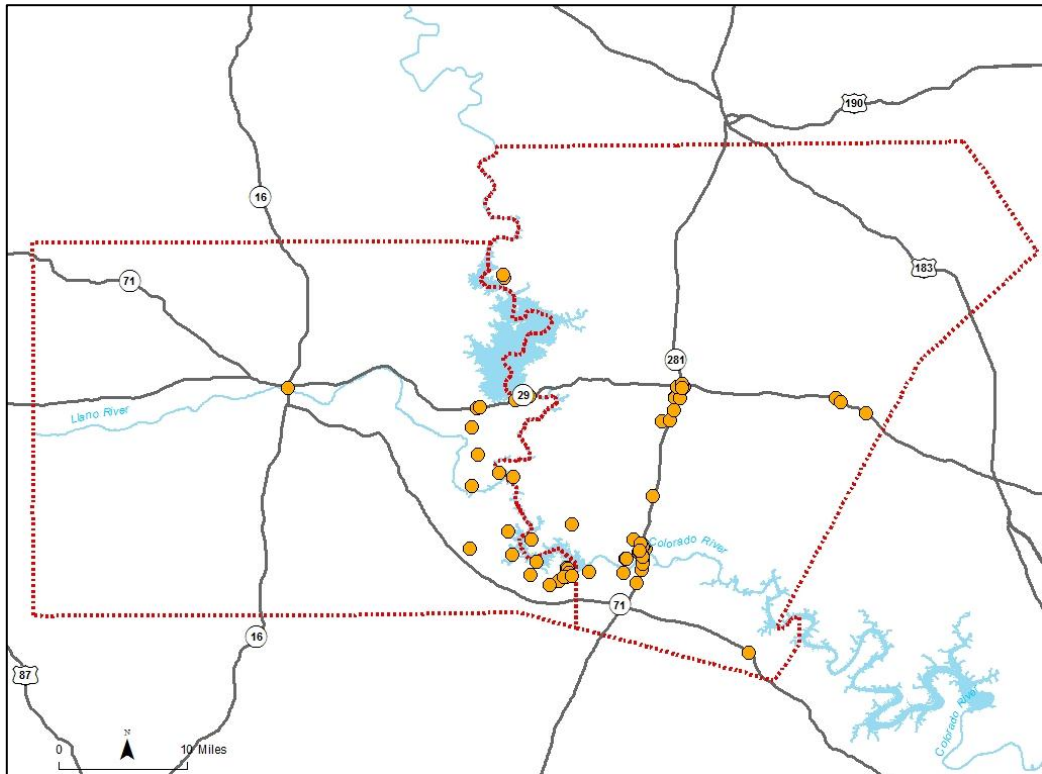
Figure 14: Total Taxable Mixed Beverage Revenue in the Upper Highland Lakes Region



Source: Texas Comptroller of Public Accounts

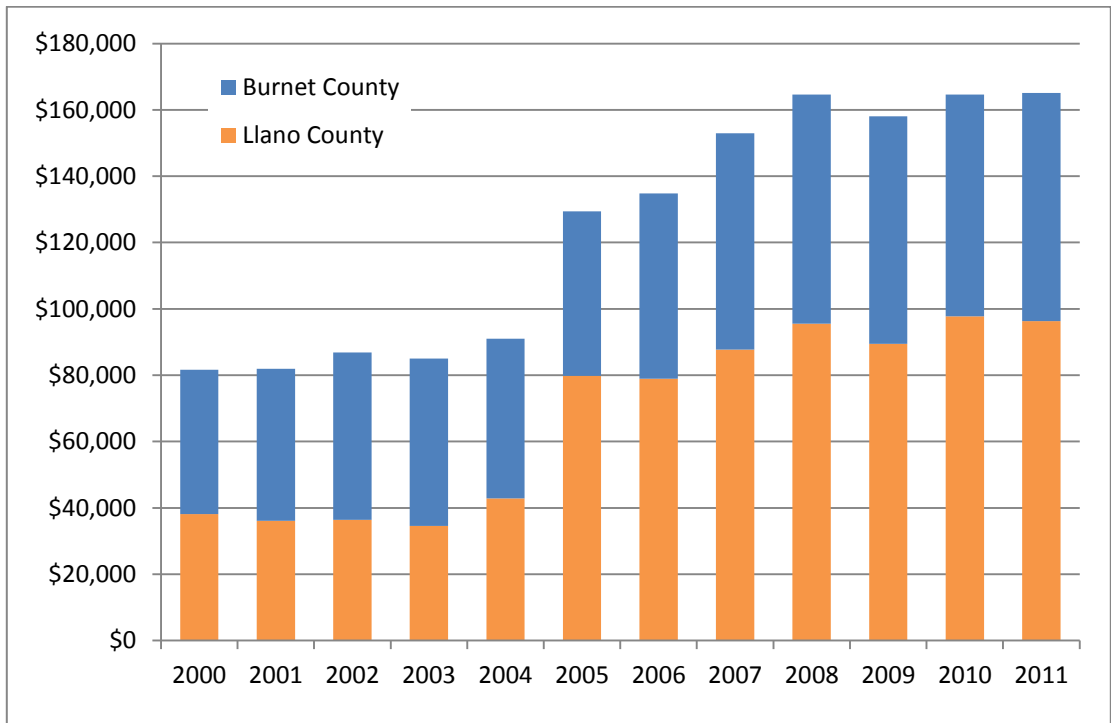
⁴ A portion of the tax paid is allocated to the county where each business is located. For any business located within an incorporated city, an equal portion of the tax paid is allocated to the city where it is located. The remaining tax is distributed to the State's General Revenue Fund. Prior to the October 2011 allocation 10.7143 percent of the tax paid was allocated to the counties and cities as indicated above. Beginning October 2011 the allocation was reduced to 8.3065 percent.

Figure 15: Location of Mixed Beverage Taxpayers in Burnet and Llano Counties



Source: Texas Comptroller of Public Accounts

Figure 16: State of Texas Mixed Beverage Tax Revenue per County



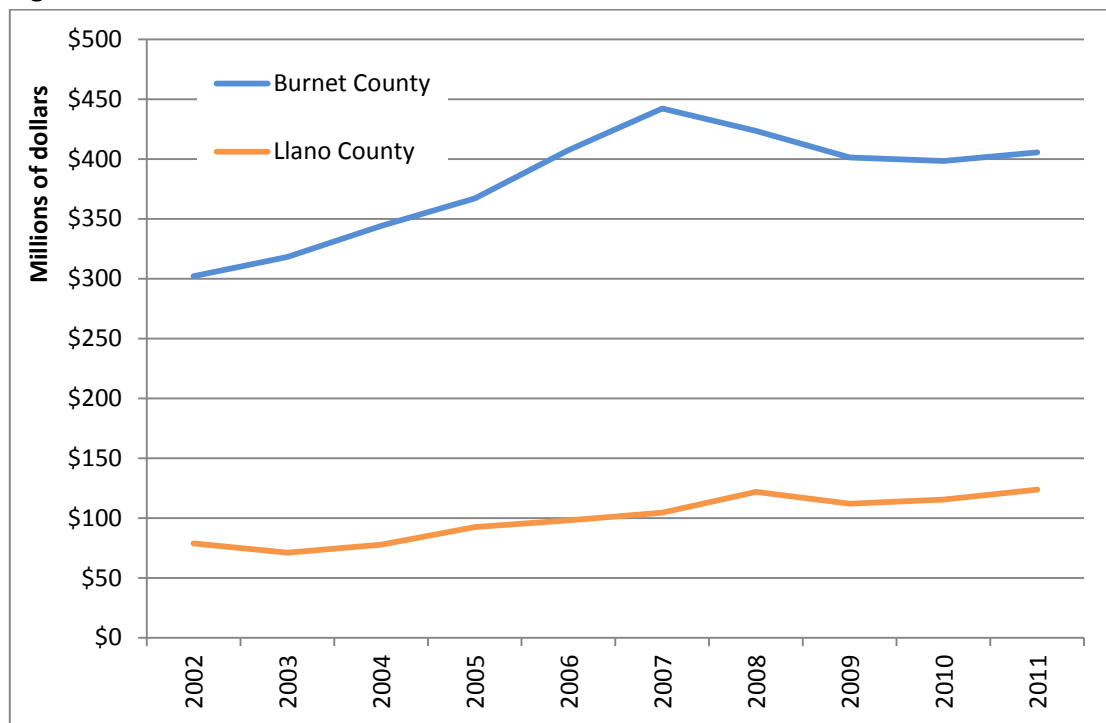
Source: Texas Comptroller of Public Accounts

Sales & Use Tax

Currently, there are 2,835 sales tax payers in the Upper Highland Lakes Region. Roughly 68.6 percent are located in Burnet County and the remaining 31.4 percent in Llano County. These businesses are clustered around the lakes or along major roadway networks. In 2011, these businesses generated \$405.4 million in taxable sales in Burnet County and \$123.6 million in taxable sales in Llano County. With the state sales tax rate at 6.25 percent, the Upper Highland Lakes Region generated approximately \$33.1 million in states sales tax revenue in 2011.

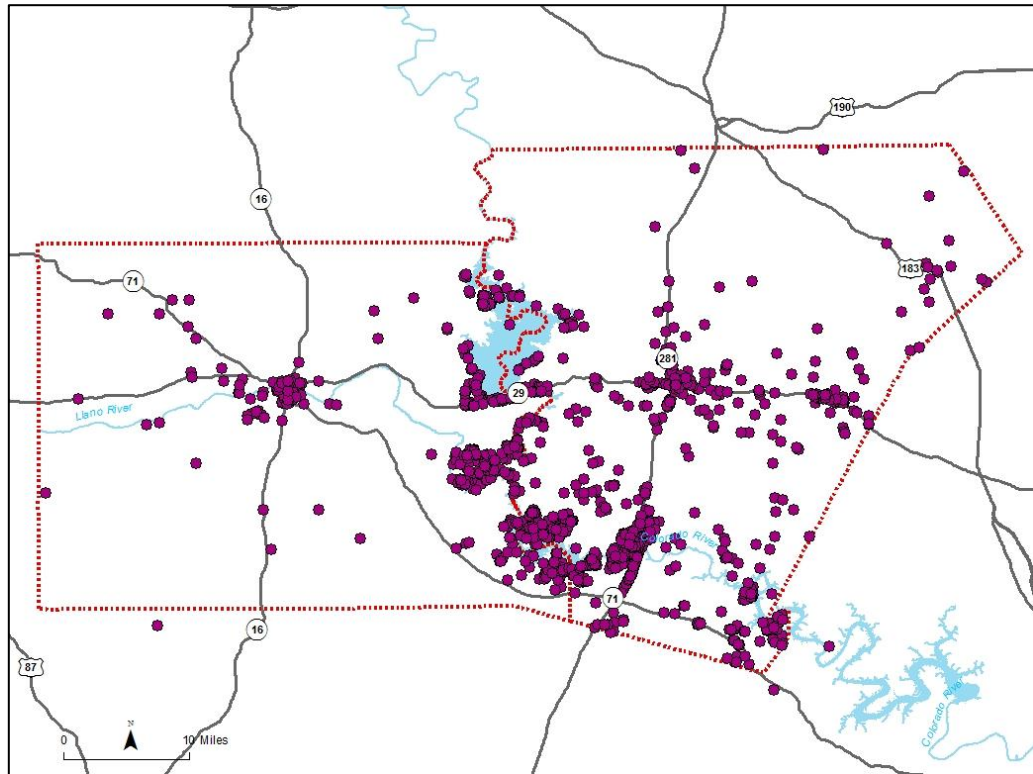
Within two miles of the water, there are well over half (53.1 percent) of all area sales tax payers. The overwhelming majority of taxable sales in the upper Highland Lakes region occurs in Marble Falls. It is the community's location on Lake Marble Falls, as well as along the major highway network, that has allowed the city to become the commercial center for the region. During the ongoing drought and low lake level conditions, Marble Falls' total taxable sales have fallen much faster than other communities' taxable sales in the two-county area. This decline is similar to the decline in visitor spending in Marble Falls – indicating the national economic recession was not the only cause of economic loss for the city. While most other communities are back to pre-recession taxable sales amounts, Marble Falls is still down 7.3 percent.

Figure 17: Taxable Sales in Burnet and Llano Counties



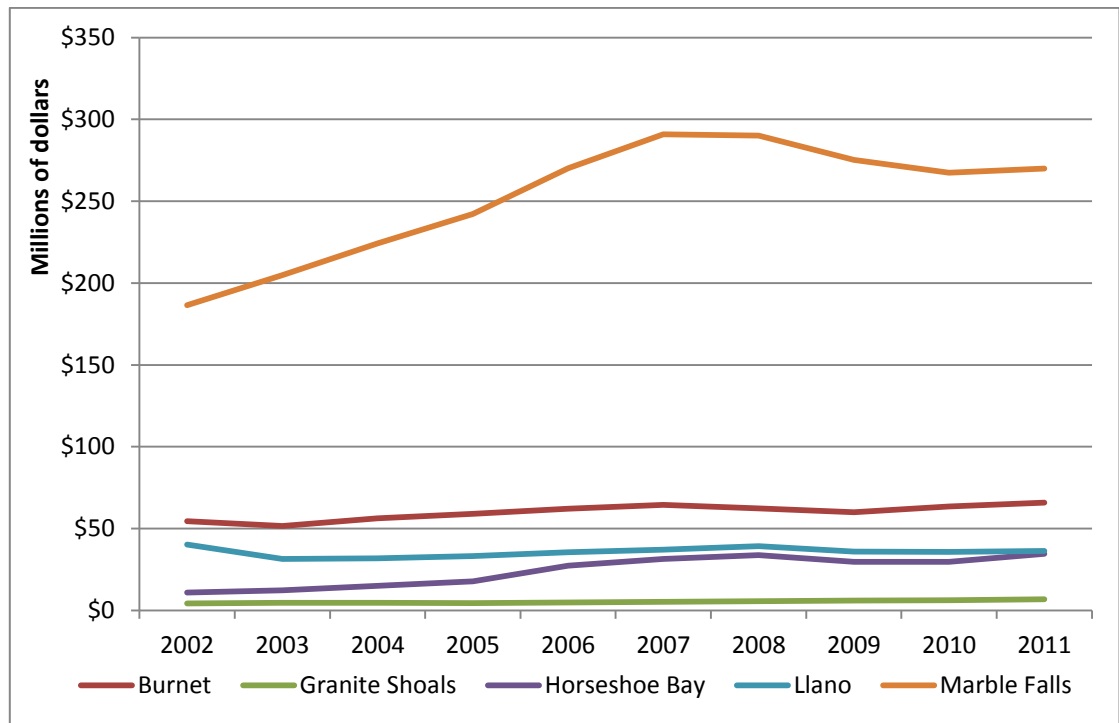
Source: Texas Comptroller of Public Accounts

Figure 18: Location of Sales Taxpayers in Burnet and Llano Counties



Source: Texas Comptroller of Public Accounts

Figure 19: Total Taxable Sales for Cities in Burnet and Llano Counties



Source: Texas Comptroller of Public Accounts

Visitor Spending in the Upper Highland Lakes Region

According to reports produced by Dean Runyan Associates for the State of Texas, direct visitor spending⁵ in the Upper Highland Lakes Region generates a significant amount of annual economic activity for the area. Since 2003, regional visitor spending increased by 89.3 percent. Statewide, visitor spending only increased 56.8 percent during this same period. In 2011, purchases by out-of-town visitors to Burnet and Llano Counties resulted in the following:

- \$161.3 million in direct economic activity
- \$58.9 million in earnings for employees and businesses owners
- 3,125 jobs (or 25.9 percent of total regional employment)
- \$3.46 million in local tax revenue⁶ excluding property taxes
- \$9.2 million in state tax revenue⁷

For Llano County, tourism spending supports 51.3 percent of all county-based jobs. In Burnet County, direct visitor spending accounts for 12.3 percent of all county-based jobs. In comparison, visitor spending is responsible for 3.7 percent of all statewide jobs. Therefore, fluctuations in visitor spending are far more meaningful and have greater consequences, positive and negative, for the Upper Highland Lakes Region. The challenge is that many public policy decisions that influence lake levels are beyond the immediate control of the local communities whose economies depend on tourism and lake-related activity.

Marble Falls is the only community in the Upper Highland Lakes Region that Dean Runyan Associates produces visitor statistics for on an annual basis. Approximately 48.8 percent of all Burnet County visitor spending occurs within Marble Falls. Despite its relatively small size, the importance of lake access is critical to out-of-town activity in this region. Marble Falls has become the major trade center for Burnet and Llano Counties. Without the spending by out-of-town guests and second homeowners, it is unlikely that the city would have as large and diverse a retail trade sector.

⁵ The impacts associated with both overnight and day travel are included if the travelers remain at the destination overnight or the destination is over 50 miles, one-way, from the traveler's home. These definitions are used to screen and, if necessary, to interpret and adjust local data used for travel impact measurements. The most conservative interpretation is employed where data limitations cause deviations from the above definition.

⁶ Tax receipts collected by counties and municipalities, as levied on applicable travel-related purchases, including lodging, food and beverage service, retail goods and auto rental. Property taxes are not included.

⁷ The state hotel/motel tax, sales tax, motor fuel tax and business franchise tax receipts attributable to travel expenditures.

Table 7: Burnet County Direct Tourism Impact

Year	Spending (\$ Millions)	Earnings (\$ Millions)	Employment	Local Tax Receipts (\$ Millions)	State Tax Receipts (\$ Millions)
2000	\$49.70	\$16.90	1,054	\$1.16	\$3.11
2001	\$50.70	\$17.60	1,015	\$1.19	\$3.18
2002	\$47.20	\$16.60	921	\$1.08	\$2.98
2003	\$47.30	\$16.50	868	\$1.05	\$2.96
2004	\$49.00	\$16.70	818	\$1.05	\$3.03
2005	\$51.00	\$16.60	786	\$1.05	\$3.06
2006	\$56.70	\$18.10	833	\$1.18	\$3.35
2007	\$61.00	\$19.20	858	\$1.28	\$3.55
2008	\$74.90	\$23.80	1,062	\$1.68	\$4.24
2009	\$61.80	\$21.70	966	\$1.37	\$3.70
2010	\$63.80	\$21.60	954	\$1.40	\$3.75
2011	\$69.90	\$23.00	974	\$1.49	\$3.96

Source: Office of the Governor, Texas Economic Development and Tourism, Dean Runyan Associates

Table 8: Llano County Direct Tourism Impact

Year	Spending (\$ Millions)	Earnings (\$ Millions)	Employment	Local Tax Receipts (\$ Millions)	State Tax Receipts (\$ Millions)
2000	\$34.40	\$10.40	718	\$0.57	\$2.12
2001	\$36.90	\$11.60	740	\$0.63	\$2.27
2002	\$37.30	\$12.20	741	\$0.65	\$2.30
2003	\$37.90	\$12.30	737	\$0.64	\$2.32
2004	\$44.60	\$14.80	891	\$0.78	\$2.69
2005	\$79.60	\$30.50	1,859	\$1.68	\$4.72
2006	\$87.50	\$33.10	1,965	\$1.88	\$5.15
2007	\$85.90	\$31.90	1,823	\$1.82	\$5.02
2008	\$85.30	\$31.00	1,764	\$1.78	\$4.90
2009	\$88.10	\$35.50	2,101	\$1.90	\$5.22
2010	\$91.90	\$37.00	2,000	\$2.00	\$5.41
2011	\$91.40	\$35.90	2,151	\$1.96	\$5.29

Source: Office of the Governor, Texas Economic Development and Tourism, Dean Runyan Associates

Table 9: Upper Highland Lakes Region Direct Tourism Impact

Year	Spending (\$ Millions)	Earnings (\$ Millions)	Employment	Local Tax Receipts (\$ Millions)	State Tax Receipts (\$ Millions)
2000	\$84.10	\$27.30	1,772	\$1.73	\$5.23
2001	\$87.60	\$29.20	1,755	\$1.82	\$5.44
2002	\$84.50	\$28.80	1,662	\$1.72	\$5.28
2003	\$85.20	\$28.80	1,605	\$1.69	\$5.28
2004	\$88.60	\$31.50	1,709	\$1.84	\$5.72
2005	\$130.60	\$47.10	2,645	\$2.73	\$7.78
2006	\$144.20	\$51.20	2,798	\$3.06	\$8.50
2007	\$146.90	\$51.10	2,681	\$3.10	\$8.57
2008	\$160.20	\$54.80	2,826	\$3.46	\$9.14
2009	\$149.90	\$57.20	3,067	\$3.27	\$8.92
2010	\$155.70	\$58.60	2,954	\$3.40	\$9.17
2011	\$161.30	\$58.90	3,125	\$3.46	\$9.24

Source: Office of the Governor, Texas Economic Development and Tourism, Dean Runyan Associates

Table 10: City of Marble Falls Direct Tourism Impact

Year	Spending (\$ Millions)	Earnings (\$ Millions)	Employment	Local Tax Receipts (\$ Millions)	State Tax Receipts (\$ Millions)
2002	\$23.50	\$8.50	473	\$0.58	\$1.45
2003	\$21.60	\$7.80	411	\$0.53	\$1.32
2004	\$21.50	\$7.60	373	\$0.51	\$1.30
2005	\$19.90	\$6.80	321	\$0.45	\$1.17
2006	\$24.10	\$8.00	369	\$0.55	\$1.40
2007	\$24.00	\$7.90	350	\$0.55	\$1.37
2008	\$39.30	\$13.00	579	\$0.97	\$2.21
2009	\$28.20	\$10.30	458	\$0.68	\$1.66
2010	\$32.70	\$11.60	510	\$0.79	\$1.89
2011	\$34.10	\$11.80	500	\$0.81	\$1.90

Source: Office of the Governor, Texas Economic Development and Tourism, Dean Runyan Associates

Lake-Related Economic Activity

Key Findings

- In the Upper Highland Lakes Region, the properties around the lakes are among the most valuable in the area. Lake-related properties in this region account for just 1.9 percent of the geographic area of the counties, but a disproportionately large 46.7 percent of their total taxable value.
- The average taxable value of a home on the lakes is substantially greater than the countywide averages – ranging from approximately 70 percent higher around Lake Buchanan to more than three-and-a-half times the average home price in Burnet and Llano Counties around Lake LBJ and Lake Marble Falls.
- Mixed beverage permit holders around the Upper Highland Lakes generate between \$70,000 and \$83,000 in annual State of Texas tax revenue.
- The proportion of taxable hotel room revenue attributable to lake-related hotel properties is approximately 75.0 percent of total Upper Highland Lakes Region hotel sector activity. Lake-related hotel activity generates more than \$1.0 million in tax revenue for the State of Texas annually.
- In 2011, direct purchases by lake-related visitors to Burnet and Llano Counties resulted in the following:
 - \$122.5 million in direct economic activity
 - \$45.3 million in earnings for employees and businesses owners
 - 2,454 jobs
 - \$2.6 million in local tax revenue excluding property taxes
 - \$7.0 million in state tax revenue
- The total economic impact of lake-related visitor spending in the Upper Highland Lakes including the multiplier effects supported:
 - \$185.5 million in total economic activity
 - \$81.7 million in earnings for employees and businesses owners
 - 3,648 jobs

Defining Lake-Related Activity

To provide an order of magnitude estimate in support of broader community conversations and public policy decisions regarding the Upper Highland Lakes, this section depicts key measurements of lake-related activity. As discussed before, the Upper Highland Lakes stimulate the regional economy in a variety of ways. Some indicators, such as visitor spending and hotel activity, overlap and should not be added together without adjustment. Therefore, this section focuses on six metrics to gauge the relative importance of lake-related activity to Burnet and Llano Counties as well as tax revenue for local and state governments.

All properties within a quarter-mile of the Colorado River were plotted in GIS software. In combination with other public datasets, it was possible to estimate the impact of specific lake-related activity. To be conservative, the study excludes a detailed examination of certain industry sectors such as marinas and boat sales. While most people would agree these sectors are lake-related, it is challenging to separate sales from visitor reports that provide aggregate spending for a number of sectors. In addition, the Texas Comptroller of Public Account does not always release detailed statistics on individual businesses. Therefore, it was not possible to disaggregate countywide data for the small subarea surrounding the lakes. Large master-planned communities in places such as Horseshoe Bay that are logically lake-related but further than a quarter-mile from water are not included.

There is no single statistic or aggregate value that encapsulates the importance of the Highland Lakes on Burnet and Llano Counties. Instead, the following datasets illuminate what most stakeholders in the region intuitively understand – the Upper Highland Lakes are critical to the area’s long-term economic sustainability. The six lake-related indicators are:

- **Lake-Related Total Taxable Property Values** illustrate the disproportionate share of public sector property tax revenue linked to sustainable lake levels
- **Lake-Related Single-Family Home Values** measure the premium the lakes command relative to the rest of the county – helping to isolate the effects of the lakes
- **Lake-Related Second Homeowners** serve as a proxy for vacation homeowners who pay property taxes, but require fewer services than full-time residents
- **Lake-Related Taxable Hotel Revenue (HOT)** is the best single indicator of water-related tourism
- **Lake-Related Mixed Beverage Tax Revenue** supplement other visitor spending data
- **Lake-Related Tourism Spending** extrapolates from data produced for the State of Texas to calculate how out-of-town visitor spending ripples through the economy

Lake-Related Total Taxable Property Values

In the Upper Highland Lakes Region, the properties around the lakes are among the most valuable in the area. Lake-related properties in this region account for just 1.9 percent of the geographic area of the counties, but a disproportionately large 46.7 percent of their total taxable value. In 2011, there was \$3.3 billion in taxable value attributable to these approximately 22,000 acres along the five Highland Lakes. The majority of this taxable value is concentrated in the properties immediately adjacent to the Lakes (or “Water Adjacent” properties in this report). In 2011, lake-related properties generated approximately \$5.3 million for Burnet County and \$4.5 million for Llano County in property tax revenue.

Table 11: 2011 Total Taxable Value by Lake for Lake-Related Property (\$ Millions)

Area	Buch.	Inks	LBJ	Marble Falls	Travis	All Lakes	Rest of County
Burnet County	\$234.7	\$49.0	\$1,092.8	\$97.0	\$95.1	\$1,568.6	\$2,320.3
Llano County	\$184.8	\$30.7	\$1,475.1	\$0.0	\$0.0	\$1,690.5	\$1,395.5
Total Lake Related (LR)	\$419.5	\$79.6	\$2,567.8	\$97.0	\$95.1	\$3,259.1	N/A
LR as % 2 County Total*	6.0%	1.1%	36.8%	1.4%	1.4%	46.7%	N/A

Source: Burnet Central Appraisal District and Llano Central Appraisal District

*Total 2011 taxable value for Burnet County was \$3.89 billion and for Llano County was \$3.09 billion

Table 12: 2011 Acreage by Lake-Related Property

Area	Buch.	Inks	LBJ	Marble Falls	Travis	All Lakes	Rest of County
Burnet County	5,021	585	3,746	857	5,810	16,019	615,899
Llano County	2,241	339	3,175	-	-	5,755	500,117
Total Lake Related (LR)	7,262	925	6,920	857	5,810	21,774	N/A
LR as % 2 County Total	0.6%	0.1%	0.6%	0.1%	0.5%	1.9%	N/A

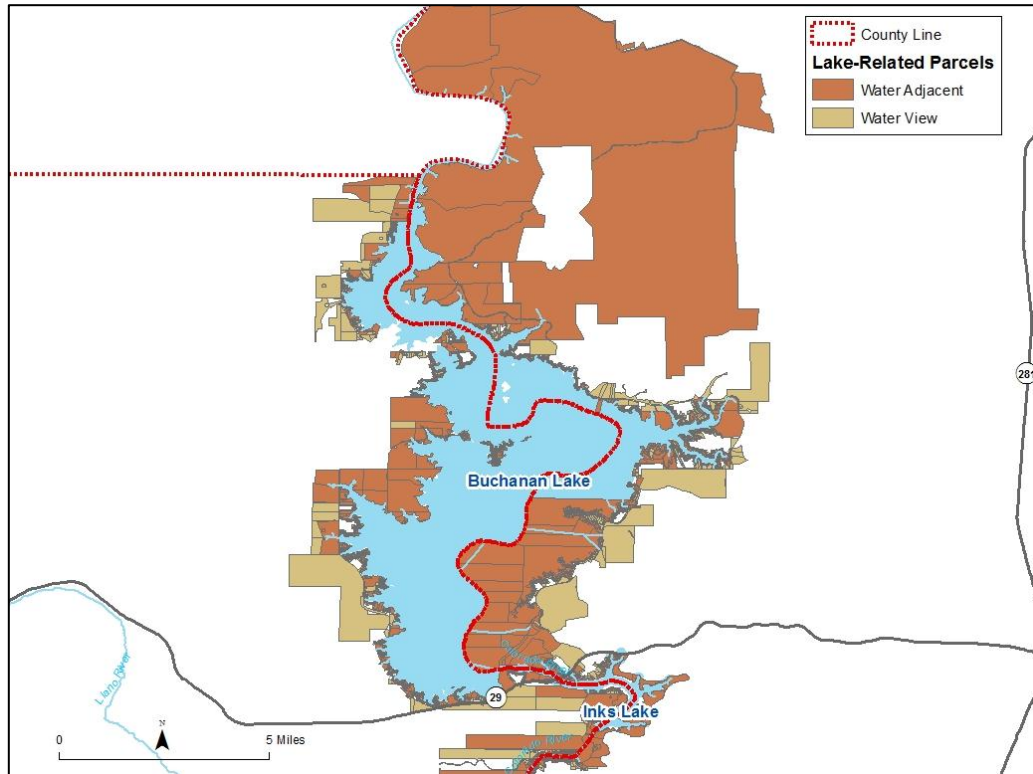
Source: Burnet Central Appraisal District and Llano Central Appraisal District

Table 13: 2011 Average Taxable Value per Acre for Lake-Related Property

Area	Buch.	Inks	LBJ	Marble Falls	Travis	All Lakes	Rest of County
Burnet County	\$46,750	\$83,670	\$291,757	\$113,210	\$16,374	\$97,922	\$3,767
Llano County	\$82,468	\$90,327	\$464,602	N/A	N/A	\$293,748	\$2,790
Total Lake Related (LR)	\$57,770	\$86,114	\$371,053	\$113,210	\$16,374	\$149,679	N/A

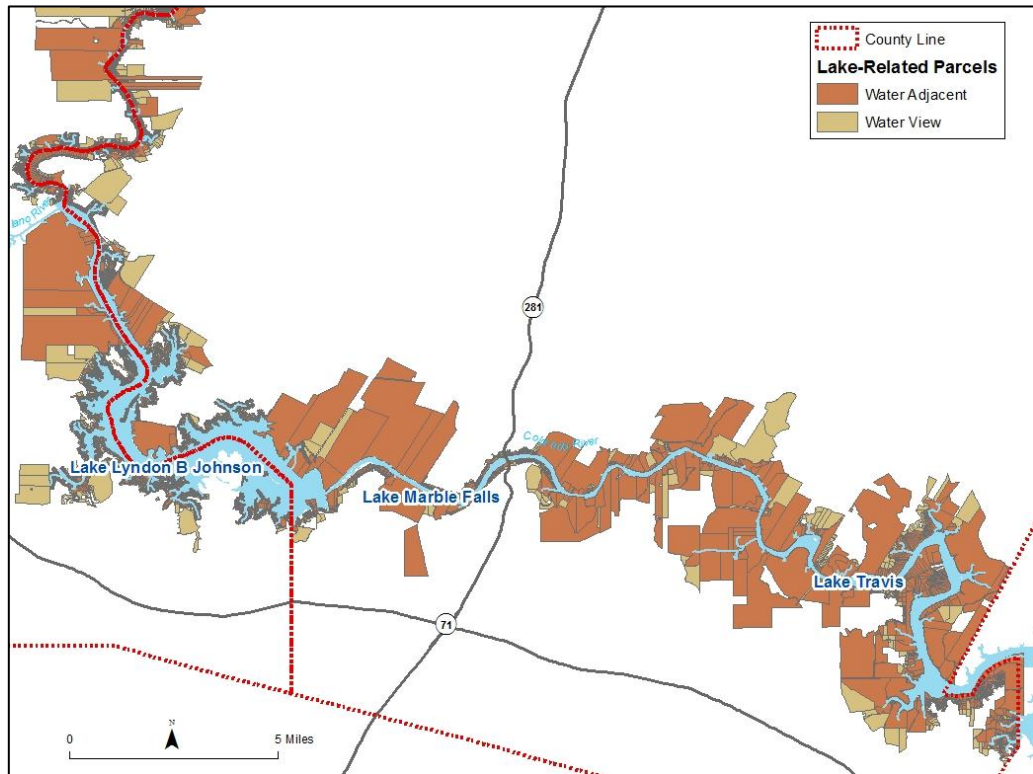
Source: Burnet Central Appraisal District and Llano Central Appraisal District

Figure 20: Lake-Related Properties (North Highland Lakes)



Source: Burnet Central Appraisal District; Llano Central Appraisal District

Figure 21: Lake-Related Properties (South Highland Lakes)



Source: Burnet Central Appraisal District; Llano Central Appraisal District

Lake-Related Single-Family Home Values

The data for single-family homes in Burnet and Llano Counties clearly shows the premium local homeowners are willing to pay to be on the water. Of the just over 25,000 single-family homes in the Upper Highland Lakes Region, 7,947 (or 31.8 percent) are located in a lake-related parcel. The average taxable value of a home on the lakes is substantially greater than that for either the county overall, ranging from approximately 70 percent higher around Lake Buchanan to more than three-and-a-half times the average home price in Burnet and Llano Counties around Lake LBJ and Lake Marble Falls. In 2011, single-family homes generated approximately \$4.9 million for Burnet County and \$4.0 million for Llano County in property tax revenue. This indicates just how valuable lake-related homes are to the overall tax base of Burnet and Llano Counties.

Table 14: 2011 Total Taxable Value of Single-Family Homes by Lake (\$ Millions)

Area	Buchanan	Inks	LBJ	Marble Falls	Travis	All Lakes	Rest of County
Burnet County	\$213.2	\$47.2	\$1,022.3	\$83.3	\$90.3	\$1,456.3	\$1,147.9
Llano County	\$154.9	\$23.7	\$1,312.9	\$0.0	\$0.0	\$1,491.5	\$851.0
Lake Related (LR)	\$368.1	\$70.9	\$2,335.2	\$83.3	\$90.3	\$2,947.9	N/A

Source: Burnet Central Appraisal District and Llano Central Appraisal District

Table 15: Total Number of Single-Family Homes by Lake

Area	Buchanan	Inks	LBJ	Marble Falls	Travis	All Lakes	Rest of County
Burnet County	935	152	2,773	194	256	4,310	10,530
Llano County	957	79	2,602	0	0	3,637	6,577
Lake Related (LR)	1,892	231	5,375	194	256	7,947	N/A

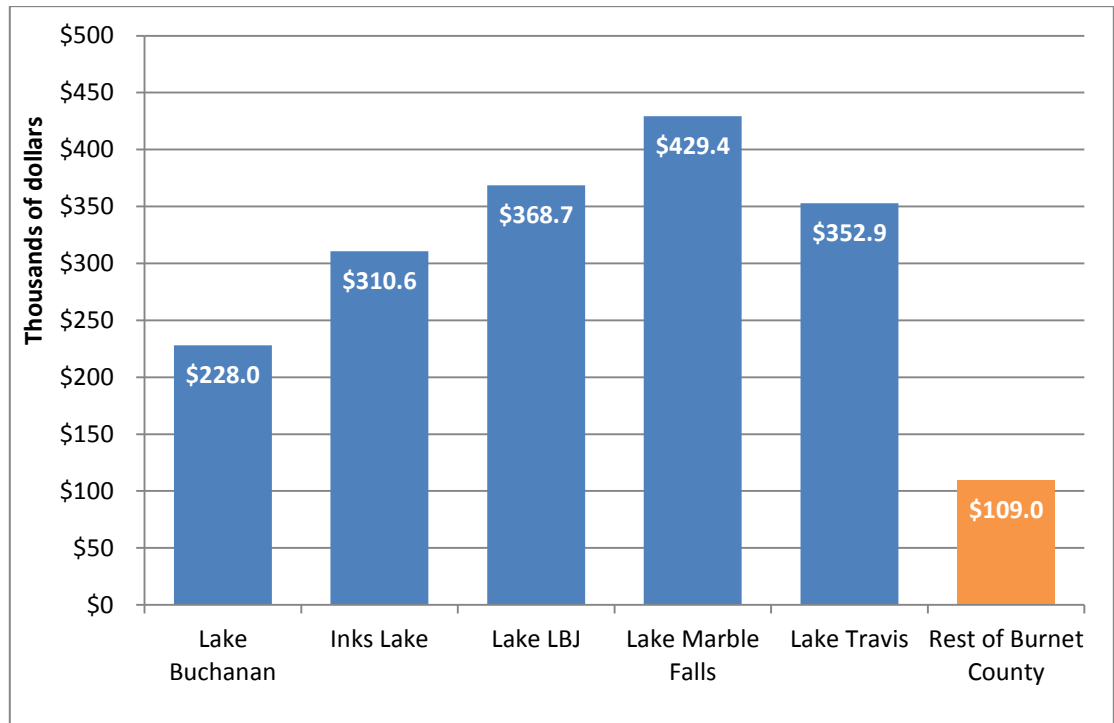
Source: Burnet Central Appraisal District and Llano Central Appraisal District

Table 16: Average Taxable Value of Single-Family Homes by Lake (\$ Thousands)

Area	Buchanan	Inks	LBJ	Marble Falls	Travis	All Lakes	Rest of County
Burnet County	\$228.0	\$310.6	\$368.7	\$429.4	\$352.9	\$337.9	\$109.0
Llano County	\$161.9	\$300.9	\$504.6	N/A	N/A	\$410.1	\$129.4
Lake Related (LR)	\$194.6	\$307.3	\$434.5	\$429.4	\$352.9	\$370.9	N/A

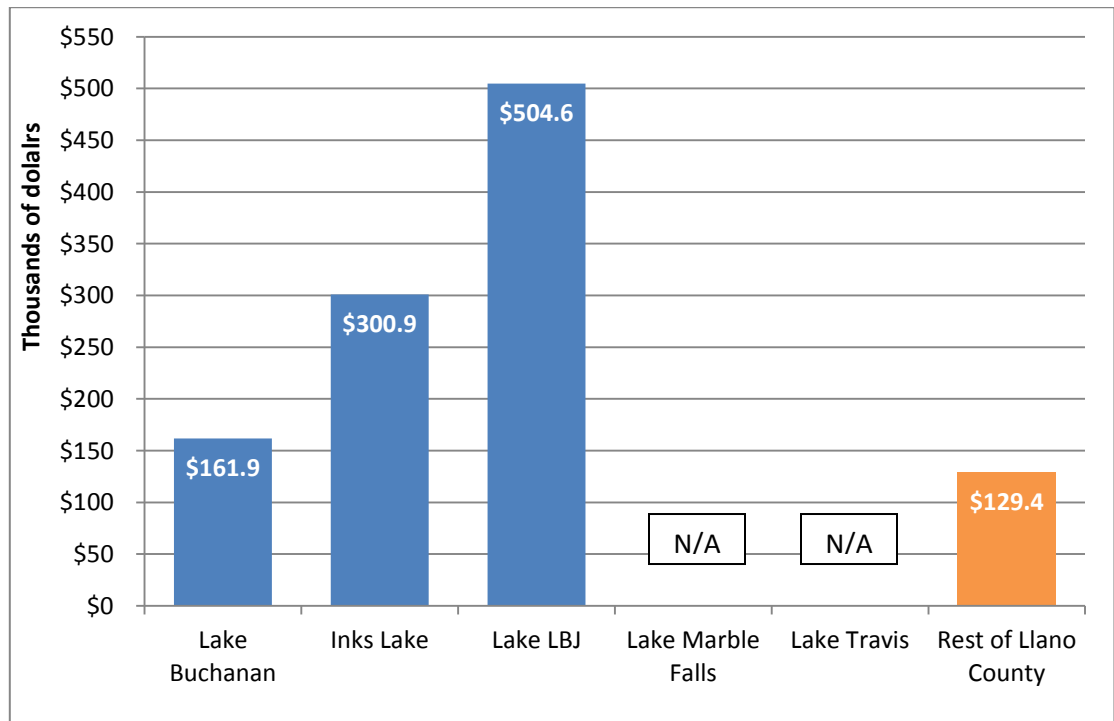
Source: Burnet Central Appraisal District and Llano Central Appraisal District

Figure 22: Average Taxable Value per Single-Family Home in Burnet County



Source: Burnet Central Appraisal District

Figure 23: Average Taxable Value per Single-Family Home in Llano County



Source: Llano Central Appraisal District

Lake-Related Second Homeowners

As illustrated in the employment and HOT revenue data, tourism is a major component of the Upper Highland Lakes Regional economy. A significant part of this economic activity can be seen in the number of vacation homes owned in the area. The single-family homes that do not qualify for a homestead exemption are the best approximation of the number of vacation or second homes.

In 2011, there were 7,136 non-homestead exempt single-family homes in Burnet County; 35.6 percent are lake-related. An additional 5,127 non-homestead exempt single-family homes are located in Llano County; 45.3 percent of these properties are lake-related. What is even more striking is that 59.6 percent of the value of all non-homestead exempt properties in both counties are found in these 4,866 lake-related homes. These properties also represent 20.8 percent and 34.2 percent of the entire county property tax base for Burnet and Llano Counties, respectively. In 2011, non-homestead exempt homes generated approximately \$2.7 million for Burnet County and \$2.2 million for Llano County in property tax revenue.

Table 17: 2011 Total Burnet County Taxable Value of Non-Homestead Exempt Properties by Lake (\$ Millions)

Section	Buchanan	Inks	LBJ	Marble Falls	Travis	All Lakes
Water Adjacent	\$98.7	\$26.3	\$530.8	\$30.0	\$48.6	\$734.4
Water View	\$10.1	\$1.7	\$61.4	-	\$2.8	\$76.0
Total Lake Related (LR)	\$108.7	\$28.0	\$592.3	\$30.0	\$51.4	\$810.4
LR as % of Non-HS	9.4%	2.4%	51.4%	2.6%	4.5%	70.3%
LR as % of County Total	2.8%	0.7%	15.2%	0.8%	1.3%	20.8%

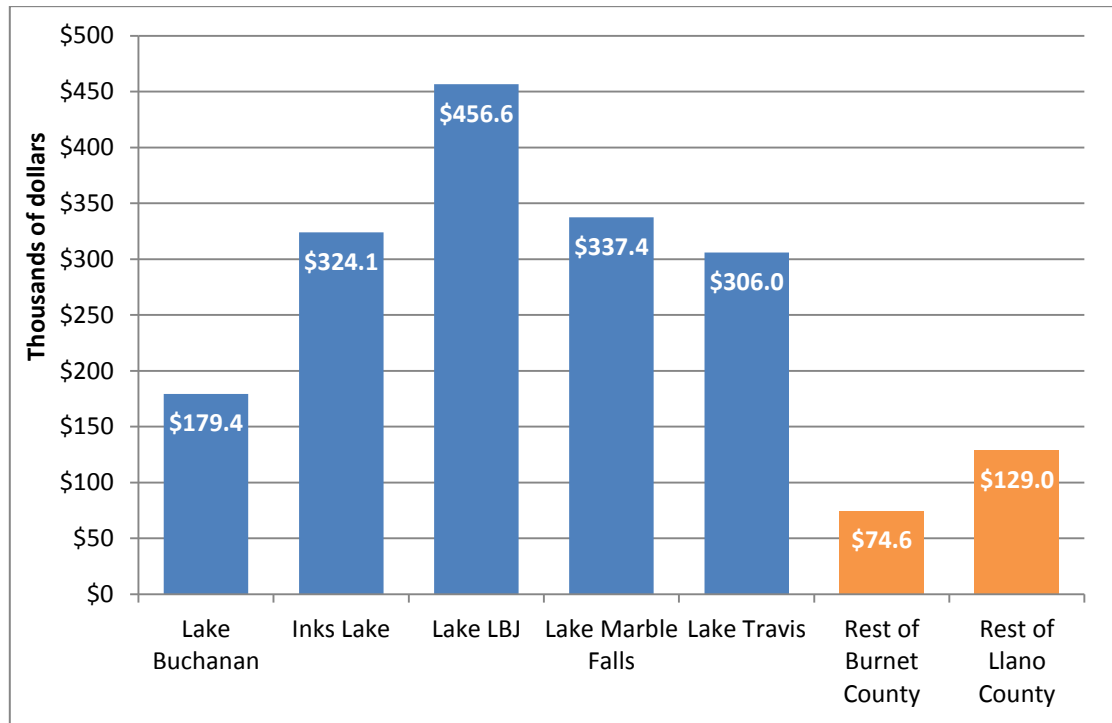
Source: Burnet Central Appraisal District

Table 18: 2011 Total Llano County Taxable Value of Non-Homestead Exempt Properties by Lake (\$ Millions)

Section	Buchanan	Inks	LBJ	Marble Falls	Travis	All Lakes
Water Adjacent	\$75.0	\$15.0	\$909.3	-	-	\$999.3
Water View	\$11.9	\$0.5	\$43.7	-	-	\$56.1
Total Lake Related (LR)	\$86.9	\$15.5	\$953.0	-	-	\$1,055.4
LR as % of County	6.1%	1.1%	67.3%	-	-	74.5%
LR as % of County Total	2.8%	0.5%	30.9%	-	-	34.2%

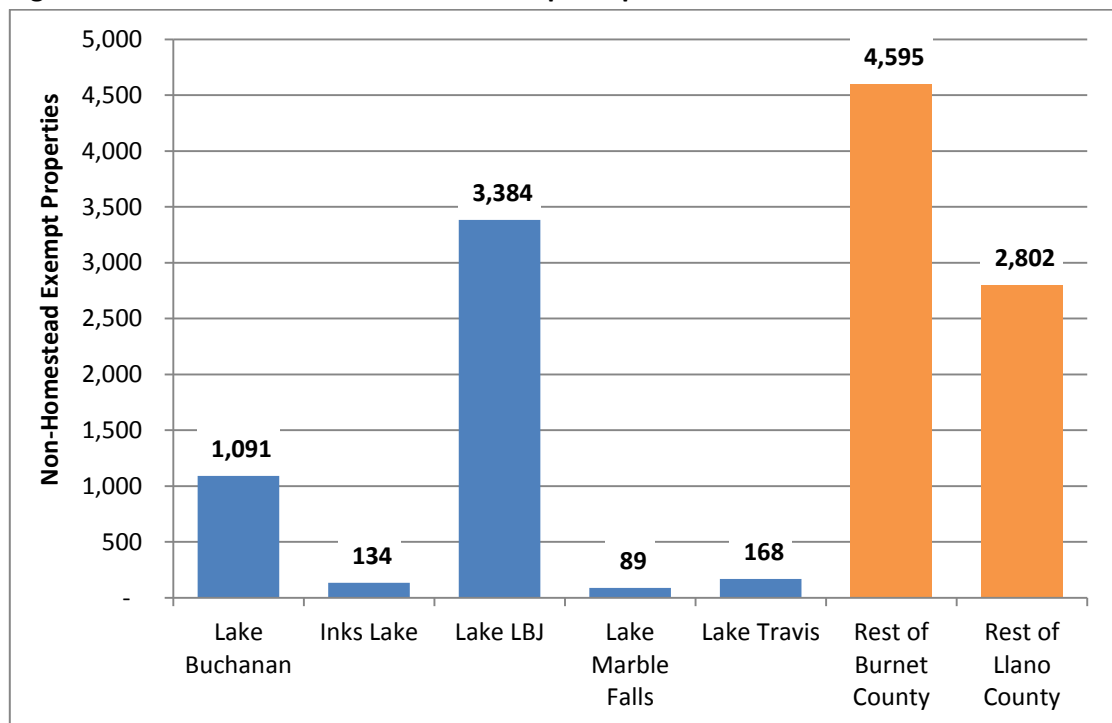
Source: Llano Central Appraisal District

Figure 24: Average Taxable Value per Non-Homestead Exempt Single-Family Home



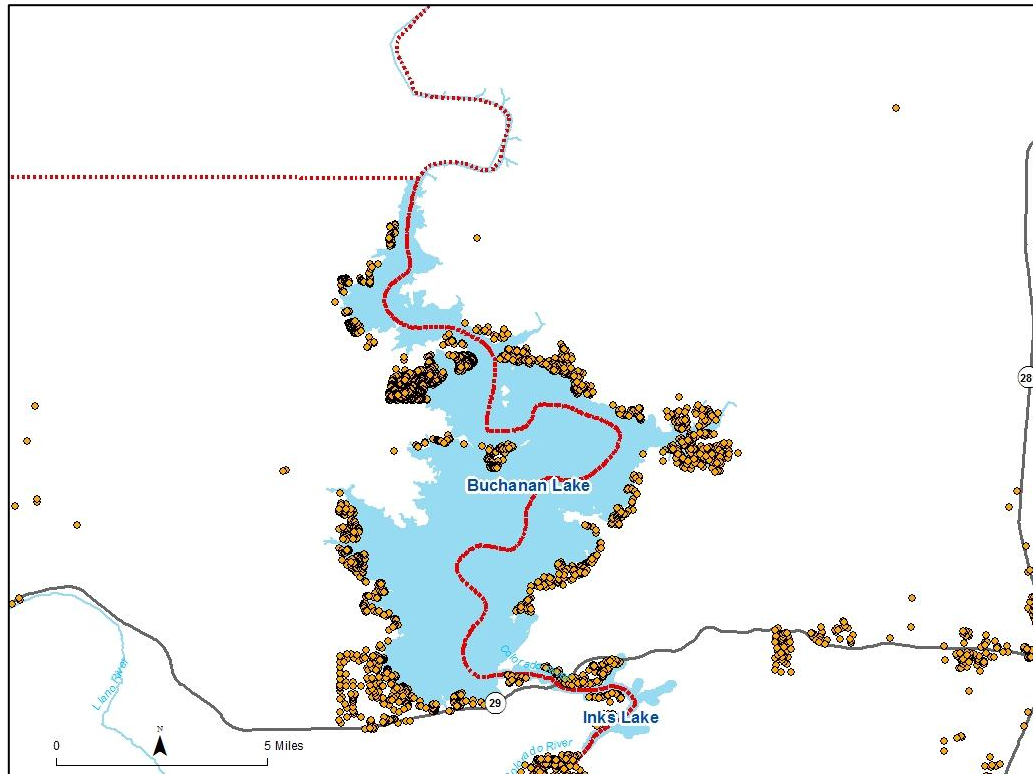
Source: Burnet Central Appraisal District and Llano Central Appraisal District

Figure 25: Number of Non-Homestead Exempt Properties



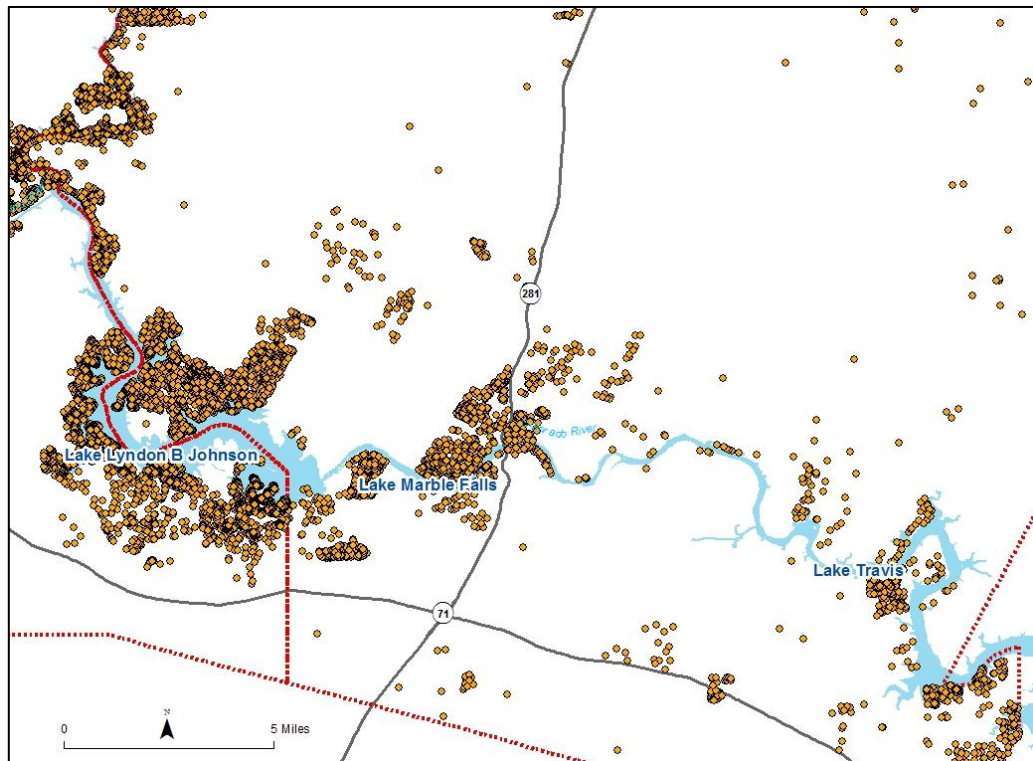
Source: Burnet Central Appraisal District and Llano Central Appraisal District

Figure 26: Lake-Related Non-Homestead Exempt SFHs (North Highland Lakes)



Source: Burnet Central Appraisal District; Llano Central Appraisal District

Figure 27: Lake-Related Non-Homestead Exempt SFHs (South Highland Lakes)



Source: Burnet Central Appraisal District; Llano Central Appraisal District

Lake-Related Taxable Hotel Revenue

HOT revenue associated with lake-related visitors has grown steadily over the past five years. During this period, the proportion of sales and the taxes generated that are attributable to lake-related hotel properties has consistently been approximately 75.0 percent of the total revenue generated by the entire hotel industry in the Upper Highland Lakes Region. Lake-related hotel activity generates more than \$1.0 million in tax revenue for the State of Texas annually.

Approximately 60.0 percent, or 325 of the 535 HOT paying locations in Burnet and Llano Counties, are lake-related. As depicted in the maps that follow, there are a substantial number of hotel locations, particularly around Lake LBJ and Lake Marble Falls, which are slightly outside the designated “lake-related” boundary. If the properties were included, the proportion of lake adjacent hotels would be even greater.

Lake LBJ HOT-paying businesses generate the majority of lake-related hotel revenue. Hotel activity around Lake LBJ is more than the rest of hotel activity in Burnet and Llano counties combined. In 2011, nearly two-thirds of all lake-related hotel rooms were located around Lake LBJ.

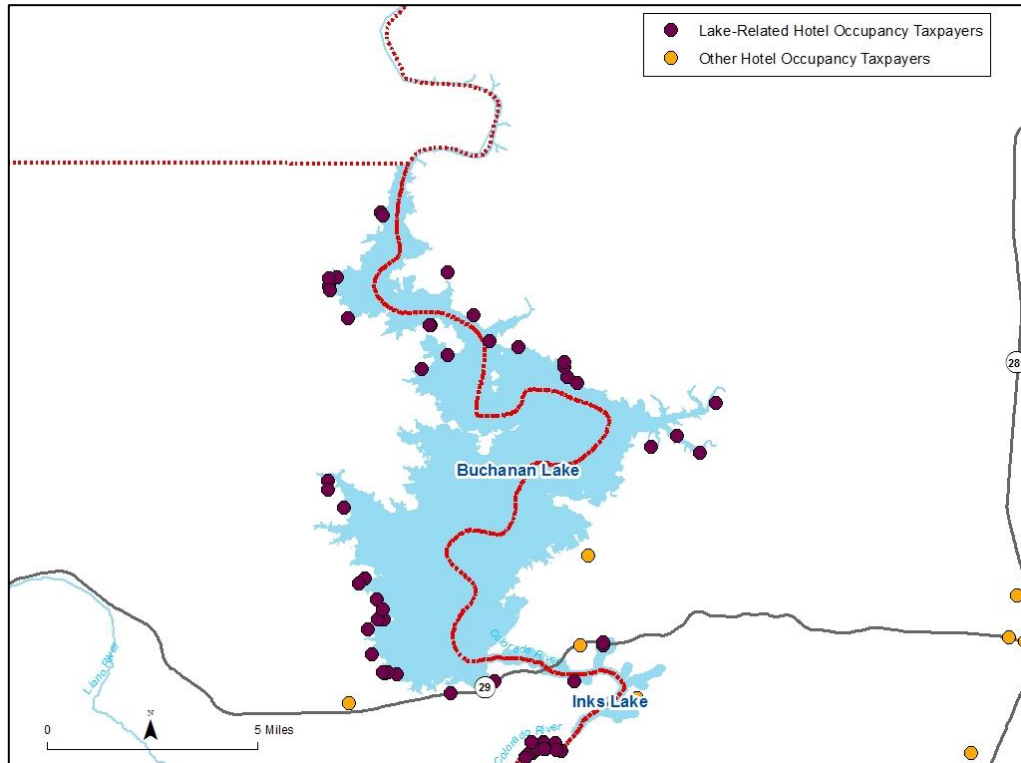
The total hotel room capacity in the Upper Highland Lakes Region has grown by 43.6 percent over the past decade. The number of hotel rooms available at lake-related properties grew slightly faster, by 48.8 percent, over the same period. This indicates not only the consistent growth of the tourism and hospitality industries between 2000 and 2011 for the region, but also the role of the lakes in driving this growth.

Table 19: Taxable Hotel Sales by Year by Lake

Lake	2007	2008	2009	2010	2011
Buchanan	\$2,782,030	\$3,000,938	\$2,110,620	\$2,357,283	\$2,394,186
Inks	\$21,775	\$20,148	\$35,120	\$47,255	\$59,983
LBJ	\$12,623,265	\$14,332,725	\$13,434,623	\$14,053,324	\$15,422,140
Marble Falls	\$1,852,820	\$2,393,528	\$3,006,561	\$2,946,221	\$2,950,097
Travis	\$98,832	\$177,122	\$107,532	\$217,738	\$170,512
<i>All Lake Related (LR)</i>	\$17,378,722	\$19,924,459	\$18,694,456	\$19,621,821	\$20,996,917
Total Receipts	\$23,378,828	\$26,243,741	\$24,709,438	\$26,267,214	\$28,011,602
LR as % of Total	74.3%	75.9%	75.7%	74.7%	75.0%
LR State Tax Revenue	\$1,042,723	\$1,195,468	\$1,121,667	\$1,177,309	\$1,259,815

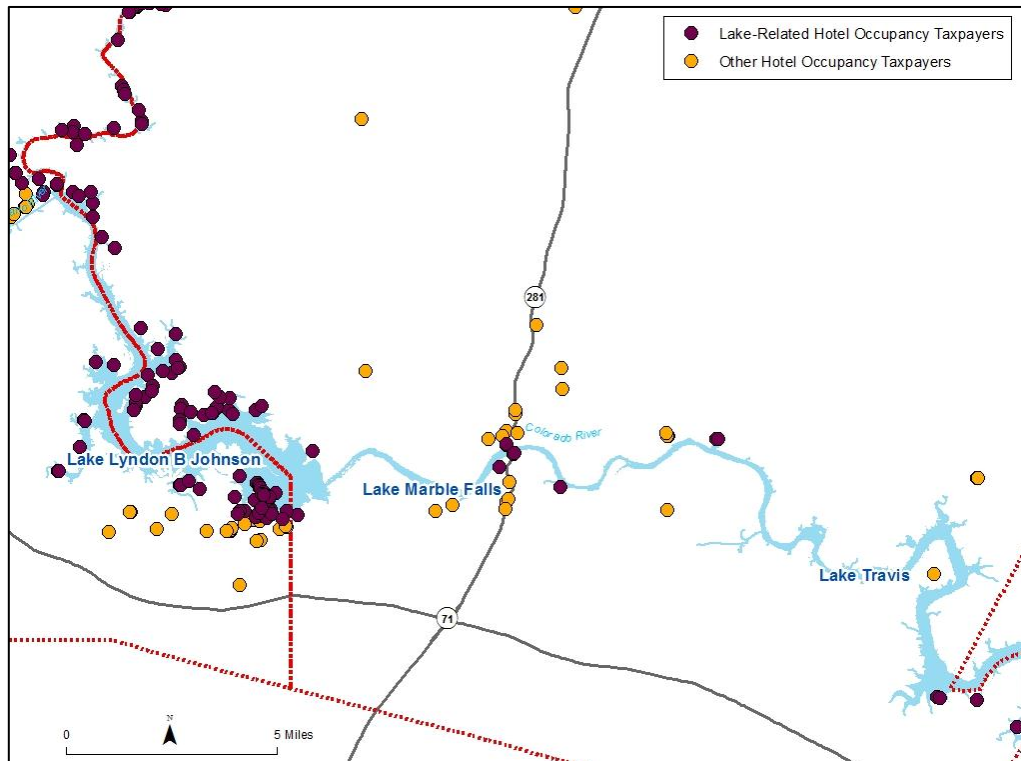
Source: Texas Comptroller of Public Accounts

Figure 28: Lake-Related Hotel Occupancy Taxpayers (North Highland Lakes)



Source: Texas Comptroller of Public Accounts

Figure 29: Lake-Related Hotel Occupancy Taxpayers (South Highland Lakes)



Source: Texas Comptroller of Public Accounts

Lake-Related Mixed Beverage Tax Revenue

Burnet and Llano Counties generate less mixed beverage tax revenue than HOT revenue, but this tax revenue still shows the disproportionate importance of lake-related properties in the Upper Highland Lakes Regional economy. Only 25.4 percent of mixed beverage taxpaying locations in the area are lake-related. Yet, of the just over \$1.2 million in mixed beverage sales generated in Burnet and Llano Counties annually, around half of this is attributable to lake-related businesses. Similar to hotel sales, the majority of this activity is located around Lake LBJ.

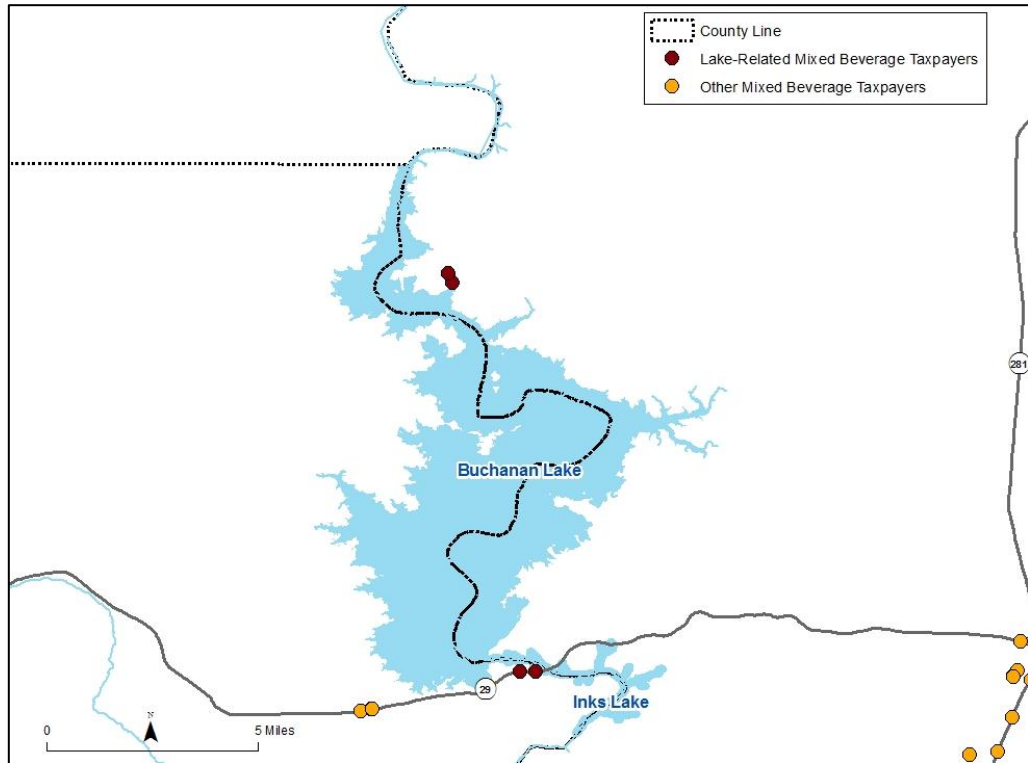
This lake-related activity accounts for between \$70,000 and \$83,000 in annual State of Texas tax revenue over the past five years. Of this, the state remits approximately 10.0 percent back to the city or county jurisdiction of the taxpayer.

Table 20: Mixed Beverage Sales by Year by Lake

Lake	2007	2008	2009	2010	2011
Buchanan	\$0	\$0	\$0	\$0	\$8,406
Inks	\$19,610	\$20,448	\$15,043	\$16,191	\$19,370
LBJ	\$343,308	\$360,364	\$349,581	\$366,067	\$363,345
Marble Falls	\$141,075	\$155,253	\$208,390	\$210,506	\$155,637
<i>All Lake-Related (LR)</i>	<i>\$503,992</i>	<i>\$536,065</i>	<i>\$573,015</i>	<i>\$592,764</i>	<i>\$546,757</i>
Total Receipts	\$1,092,509	\$1,175,768	\$1,128,772	\$1,175,842	\$1,179,232
LR as % of Total	46.1%	45.6%	50.8%	50.4%	46.4%
LR State Tax Revenue	\$70,559	\$75,049	\$80,222	\$82,987	\$76,546
Local Tax Revenue	\$7,560	\$8,041	\$8,595	\$8,891	\$8,201

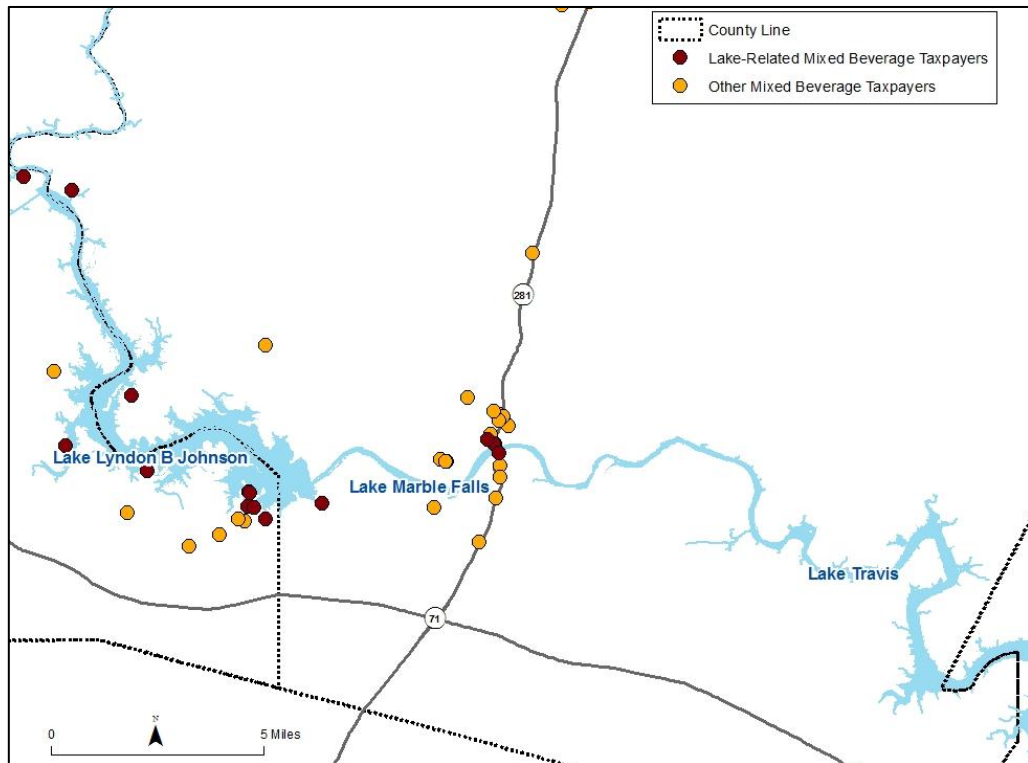
Source: Texas Comptroller of Public Accounts

Figure 30: Lake-Related Mixed Beverage Taxpayers (North Highland Lakes)



Source: Texas Comptroller of Public Accounts

Figure 31: Lake-Related Mixed Beverage Taxpayers (South Highland Lakes)



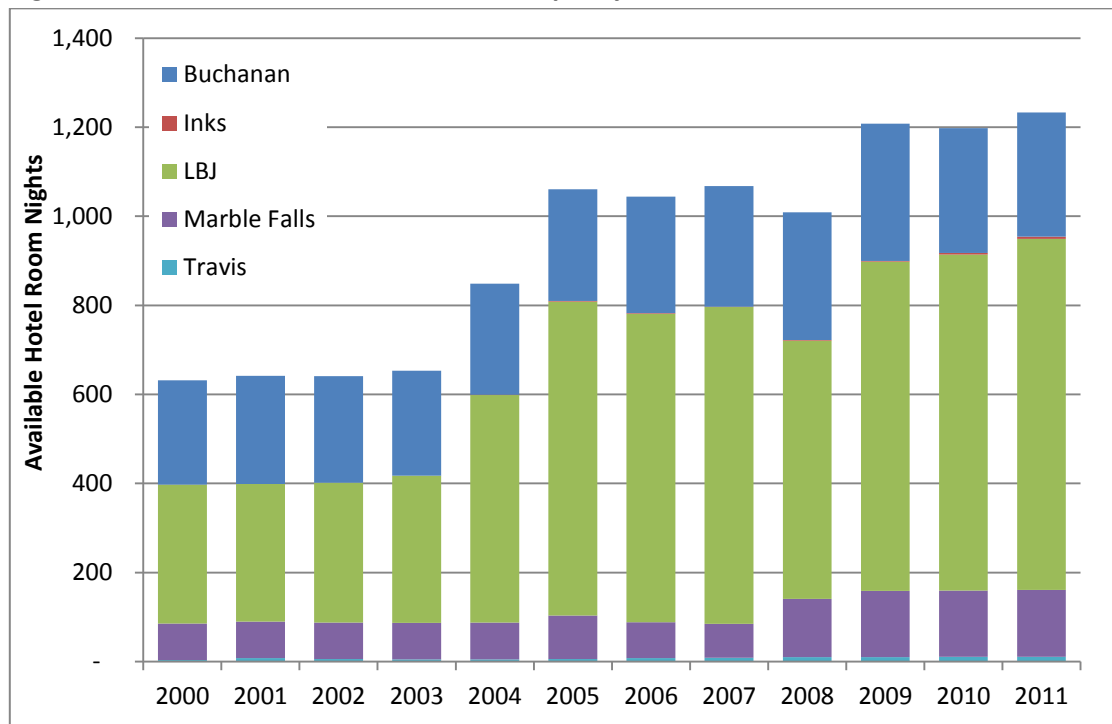
Source: Texas Comptroller of Public Accounts

Lake-Related Tourism Spending

The Upper Highland Lakes are not the only reason visitors travel to Burnet and Llano Counties. Business travelers, day trippers, family, and friends make thousands of trips each year without ever taking advantage of lake-related opportunities. The State of Texas does not produce information on the primary reason people visit the study area. In order to determine the proportion of lake-related visitor spending as a percentage of overall visitor activity, the location of all lodging facilities were plotted in GIS. Based on the location of the hotel as well as total room capacity and taxable room revenue, it was possible to estimate lake-related tourism activity for each county. The assumption is that lake-related visitors will stay on the lake while others not as interested will pay less at non-water properties in other parts of the area. This approach likely undercounts lake-related visitor spending since a hotel a few blocks from the water is not considered lake-related even though many guests might chose this location because of hotel amenities, cost, and room availability.

The total room capacity in the Upper Highland Lakes Region is 2,300 units. Lake LBJ hotels represent 63.9 percent of total capacity at 789 units followed by Lake Buchanan at 22.6 percent (or 279 units). Many of these units are individual vacation rentals and not part of larger hotels that capture the majority of visitor spending. Based on properties with five or more units, lake-related properties represent approximately two-thirds of capacity. Using taxable HOT receipts, lake-related hotels generate 75.0 percent of the two-county total.

Figure 32: Lake-Related Total Hotel Room Capacity



Source: Texas Comptroller of Public Accounts

Economic Impact of Methodology

Building upon the direct visitor spending data, it is possible to extend the analysis by calculating the total economic impact of lake-related visitor spending. For this study, the project team used the RIMS II economic impact model produced by the U.S. Bureau of Economic Analysis. The inputs to the model were direct visitor spending, earnings, and employment. The total economic impacts were calculated for just 2011.

Economists use a number of statistics to describe regional economic activity. Four common measures are “Output” which describes total economic activity and is generally equivalent to a firm’s gross sales; “Value Added” which equals gross output of an industry or a sector less its intermediate inputs; “Employee Earnings” which corresponds to wages and benefits; and “Employment” which refers to jobs that have been created in the local economy.

In an input-output analysis, there are three types of effects: direct, indirect, and induced.

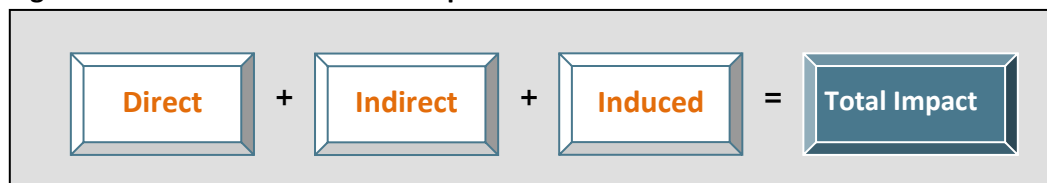
Direct effects are production changes associated with the immediate effects or final demand changes. The payment made by an out-of-town visitor to a hotel operator or meals purchased at local restaurants while in town are examples of direct effects.

Indirect effects are production changes in backward-linked industries caused by the changing input needs of directly affected industries – typically, additional purchases to produce additional output. Satisfying the demand for an overnight stay will require the hotel operator to purchase additional cleaning supplies and services. These downstream purchases affect the economic output of other local merchants.

Induced effects are the changes in regional household spending patterns caused by changes in household income generated from the direct and indirect effects. Both the hotel operator and restaurant owner experience increased income from the visitor’s stay, as do the cleaning supplies outlet.

A multiplier reflects the interaction between different sectors of the economy. An output multiplier of 1.4, for example, means that for every \$1,000 injected into the economy, all other sectors produce an additional \$400 in output. The larger the multiplier, the greater the impact will be in the regional economy.

Figure 33: The Flow of Economic Impacts



Based on room capacity and HOT receipts for each county, annual lake-related tourism estimates were derived for 2000 to 2011. In 2011, direct purchases by lake-related visitors to Burnet and Llano Counties resulted in the following:

- \$122.5 million in direct economic activity
- \$45.3 million in earnings for employees and businesses owners
- 2,454 jobs
- \$2.6 million in local tax revenue excluding property taxes
- \$7.0 million in state tax revenue

Table 21: Upper Highland Lakes Region Lake-Related Direct Tourism Impact

Year	Spending (\$ Millions)	Earnings (\$ Millions)	Employment	Local Tax Receipts (\$ Millions)	State Tax Receipts (\$ Millions)
2000	\$46.70	\$15.31	985	\$0.99	\$2.91
2001	\$48.04	\$16.11	962	\$1.02	\$2.99
2002	\$45.96	\$15.73	903	\$0.95	\$2.88
2003	\$48.01	\$16.29	902	\$0.97	\$2.98
2004	\$53.06	\$19.96	1,086	\$1.16	\$3.62
2005	\$100.55	\$36.85	2,117	\$2.11	\$5.98
2006	\$109.34	\$39.56	2,219	\$2.33	\$6.44
2007	\$112.05	\$39.64	2,129	\$2.36	\$6.54
2008	\$121.01	\$41.92	2,210	\$2.60	\$6.91
2009	\$116.11	\$44.74	2,445	\$2.52	\$6.91
2010	\$118.70	\$45.24	2,312	\$2.59	\$6.99
2011	\$122.52	\$45.27	2,454	\$2.63	\$7.03

Source: TXP, Inc.

The total impact of lake-related visitor spending in the Upper Highland Lakes yields:

- \$185.5 million in total economic activity
- \$81.7 million in earnings for employees and businesses owners
- 3,648 jobs

Table 22: Total Economic Impact of Upper Highland Lakes Lake-Related Tourism (2011)

Year	Output	Value Add	Earnings	Employment
Direct	\$95,797,913	\$57,241,080	\$45,271,997	2,454
Indirect + Induced	\$89,694,168	\$57,764,245	\$36,388,341	1,194
Total	\$185,492,081	\$115,005,326	\$81,660,338	3,648

Source: TXP, Inc.

In 2011, direct purchases by lake-related visitors to Burnet County resulted in the following:

- \$44.7 million in direct economic activity
- \$14.7 million in earnings for employees and businesses owners
- 623 jobs
- \$1.0 million in local tax revenue excluding property taxes
- \$2.53 million in state tax revenue

Table 23: Burnet County Estimated Lake-Related Direct Tourism Impact

Year	Spending (\$ Millions)	Earnings (\$ Millions)	Employment	Local Tax Receipts (\$ Millions)	State Tax Receipts (\$ Millions)
2000	\$31.64	\$10.76	671	\$0.74	\$1.98
2001	\$30.81	\$10.69	617	\$0.72	\$1.93
2002	\$28.44	\$10.00	555	\$0.65	\$1.79
2003	\$29.18	\$10.18	536	\$0.65	\$1.83
2004	\$30.29	\$10.32	506	\$0.65	\$1.87
2005	\$29.08	\$9.47	448	\$0.60	\$1.75
2006	\$30.52	\$9.74	448	\$0.64	\$1.80
2007	\$34.72	\$10.93	488	\$0.73	\$2.02
2008	\$45.04	\$14.31	639	\$1.01	\$2.55
2009	\$39.45	\$13.85	617	\$0.87	\$2.36
2010	\$39.77	\$13.47	595	\$0.87	\$2.34
2011	\$44.73	\$14.72	623	\$0.96	\$2.53

Source: TXP, Inc.; Office of the Governor, Texas Economic Development and Tourism; Dean Runyan Associates

The total impact of lake-related visitor spending in Burnet County yields:

- \$67.7 million in total economic activity
- \$26.5 million in earnings for employees and businesses owners
- 927 jobs

Table 24: Total Economic Impact of Burnet County Lake-Related Tourism (2011)

Year	Output	Value Add	Earnings	Employment
Direct	\$34,975,221	\$20,898,362	\$14,718,377	623
Indirect + Induced	\$32,746,782	\$21,095,894	\$11,830,212	303
Total	\$67,722,003	\$41,994,256	\$26,548,589	927

Source: TXP, Inc.

In 2011, direct purchases by lake-related visitors to Llano County resulted in the following:

- \$77.8 million in direct economic activity
- \$30.55 million in earnings for employees and businesses owners
- 1,831 jobs
- \$1.67 million in local tax revenue excluding property taxes
- \$4.50 million in state tax revenue

Table 25: Llano County Estimated Lake-Related Direct Tourism Impact

Year	Spending (\$ Millions)	Earnings (\$ Millions)	Employment	Local Tax Receipts (\$ Millions)	State Tax Receipts (\$ Millions)
2000	\$15.06	\$4.55	314	\$0.25	\$0.93
2001	\$17.23	\$5.42	346	\$0.30	\$1.06
2002	\$17.52	\$5.73	348	\$0.30	\$1.08
2003	\$18.82	\$6.11	366	\$0.32	\$1.15
2004	\$22.77	\$9.64	580	\$0.51	\$1.75
2005	\$71.46	\$27.38	1,669	\$1.51	\$4.23
2006	\$78.82	\$29.82	1,770	\$1.69	\$4.64
2007	\$77.32	\$28.71	1,641	\$1.63	\$4.52
2008	\$75.97	\$27.61	1,571	\$1.58	\$4.36
2009	\$76.66	\$30.89	1,828	\$1.65	\$4.54
2010	\$78.93	\$31.78	1,718	\$1.72	\$4.65
2011	\$77.79	\$30.55	1,831	\$1.67	\$4.50

Source: TXP, Inc.; Office of the Governor, Texas Economic Development and Tourism; Dean Runyan Associates

The total impact of lake-related visitor spending in Llano County yields:

- \$117.8 million in total economic activity
- \$55.1 million in earnings for employees and businesses owners
- 2,721 jobs

Table 26: Total Economic Impact of Llano County Lake-Related Tourism (2011)

Year	Output	Value Add	Earnings	Employment
Direct	\$60,822,692	\$36,342,719	\$30,553,620	1,831
Indirect + Induced	\$56,947,386	\$36,668,352	\$24,558,129	891
Total	\$117,770,078	\$73,011,070	\$55,111,749	2,721

Source: TXP, Inc.

Low Lake Level Implications for the Upper Highland Lakes Region

Key Findings

- The Highland Lakes community's overwhelming concern is that overall economic activity in the region will not return to its pre-drought growth rate because of the prolonged low lake levels. Public workshop participants feared that many homeowners will move once the water levels rise and home values rebound.
- There are 5,799 undeveloped, lake-related acres, with an additional 1,180 underdeveloped acres, in the two counties, suggesting plenty of room for future growth. If the lakes capture their expected share of anticipated regional expansion, the net increase in taxable property value would be \$1.4 billion around the lakes.
- Given the significant role the lakes and tourism play in the Upper Highland Lakes region, declining business confidence caused by lake level uncertainty could slow long-term growth even if the drought ends. Over half of the business survey respondents indicated that a 10 percent drop in lake levels cause business activity to drop by more than 20.0 percent.
- The decline in lake levels corresponds with an immediate drop in visitor spending in the Highland Lakes region. Visitor spending fell 6.4 percent between 2008 and 2009 for the two-county area.
- From 2008 to 2009, Marble Falls visitor spending dropped 39.4 percent. Local tax receipts fell 41.4 percent and state tax receipts were 33.0 percent lower. While the two-county region has finally rebounded to 2008 levels, Marble Falls visitor spending is still down \$5.2 million with 79 fewer tourism jobs.
- Three scenarios were developed to illustrate the range of what might occur to the tourism sector in Burnet and Llano Counties over the next 20 years based on water levels and visitors spending:
 - Visitor Spending – Over 20 years, visitor spending under the Low Lake Scenario (\$209.7 million) is 34.4 percent lower than Baseline Scenario (\$319.8 million).
 - Employment – Travel-generated employment for the Low Lake Scenario (2,645 jobs) is 13.2 percent smaller than Baseline Scenario (3,048).
 - State & Local Tax Receipts – Visitor supported state and local tax revenue under the Low Lake Scenario (\$10.0 million) is 43.7 percent lower than Baseline Scenario (\$17.3 million).

A typical economic impact study focuses on the current situation using sales, wage, and employment data as the inputs into the econometric model. This type of analysis was prepared for the Upper Highland Lakes Region in the previous section. Building upon this base case information, it is possible to create hypothetical situations to model what might happen if water level conditions improve or if low-lake levels continue for the near future.

There are four key local factors that influence lake-related growth in Burnet and Llano Counties:

- 1) business and resident confidence about the local economy;
- 2) availability of land for future development;
- 3) population growth; and
- 4) willingness of visitors to vacation in Burnet and Llano Counties.

To gauge local sentiment about the economy, the consulting team held a series of public workshops. The stakeholder feedback provided qualitative results as well as context from previous low lake level periods. An analysis of the amount of developable land around the lakes and population forecasts from the Texas Water Development Board provided guidance on how much growth the region might capture. Evaluating previous low lake water periods with visitor spending data indicates how the local tourism sector might respond to match projected demand.

The following section begins by summarizing public input from workshops and surveys. Second, a property tax estimate was created that forecasts future growth around the lakes (residential and commercial). Last, three scenarios were developed to provide a range of outcomes for what might occur to the tourism sector in Burnet and Llano Counties over the next 20 years.

Public Input from Burnet & Llano Counties Stakeholders

As part of this process, the community had two methods to provide input. Focus group and community members had the ability to participate in an online survey. In addition, the project team hosted four workshops in Burnet and Llano Counties. The questions posed to participants centered on the impact of the lakes on their lives and businesses, including:

- Effects on Businesses
- Effects on overall quality of life
- Implications for the environment and human health
- Long-term concerns and solutions

The following summarizes the survey and workshop results. The information provides qualitative evidence regarding the impact of low-lake levels in the community today as well as their potential influence on future decisions. Given the significant role the lakes and tourism play in the Upper Highland Lakes region, declining business confidence caused by lake level uncertainty could slow long-term growth even if the drought ends. Detailed participant comments are included in Appendix 2.

Effects on Businesses

The majority of focus group participants operate lake-related businesses. Most business owners have experienced several droughts before, but none that have caused the lakes to be low for this long. One participant had done research on the lake levels and calculated that the lake should only be this low 2 percent of the time. Since 2007, however, it has been low 50 percent of the time. The majority of survey respondents indicated that a 10 percent drop in lake levels would cause a 20 percent or greater decrease in business activity.

Quality of Life and Community Vibrancy

Residents and business owners are worried that once the lake levels return, business activity, homes sales, and the desire to live around the Highland Lakes will not return. For example, workshop participants indicated that many homeowners want to leave the area, once the water levels rise and home values rebound to pre-drought levels. Respondents felt that the lower lake levels did not just affect properties on the lake, but the entire area since residents and visitors spend money throughout the region. Moreover, the lack of a water management plan that balanced all stakeholders' needs creates uncertainty for both counties.

Effects on the Environment

The main environmental concern related to lower lake levels was the growth of salt cedar trees in the currently dry areas of the lakes. The combination of salt cedar trees and the fresh water mussels create long-term environmental issues even after lake levels return to normal. It would likely take years to re-establish Lake Buchanan's ecosystem. The fear is that tourists will be less inclined to visit the area because the natural environment and water recreation opportunities will not immediately return.

Long-term Concerns and Solutions

The community's overwhelming concern is that economic activity in the region will not return to its pre-drought growth rate because of the prolonged low lake levels. There was discussion that the management of the lakes is not sufficient given central Texas population growth, higher temperatures, and downstream user needs. Participants made comparisons to Canyon Lake and the ability to mitigate its lake level fluctuations. In that case, by working with public leaders, the Guadalupe-Blanco River Authority, business, and residents, policies were changed to maintain lake levels.

Undeveloped Land Potential Surrounding the Upper Highland Lakes

In 2011, there were 11,002 acres of lake-related development (residential/commercial) surrounding the Upper Highland Lakes with an average taxable value of \$276,171 per acre. This generated combined property tax revenue for the two-county area of \$9.7 million. There are 5,799 undeveloped, lake-related acres, with an additional 1,180 underdeveloped acres, in Burnet and Llano Counties. This undeveloped, lake-related land is split between the two counties, with the majority surrounding Lakes LBJ and Buchanan. The average value per acre of the lake-related, undeveloped property is \$37,556.

Table 27: Undeveloped Land Surrounding Highland Lakes (Acres)

Section	Buchanan	Inks	LBJ	Marble Falls	Travis	All Lakes
Burnet County	630	22	666	427	791	2,536
Llano County	1,352	97	1,813	-	-	3,263
Total	1,982	120	2,479	427	791	5,799

Source: Burnet Central Appraisal District and Llano Central Appraisal District

According to the Texas Water Development Board, Burnet and Llano Counties should double over the next 50 years – adding over 70,000 new residents. Water adjacent Marble Falls is forecast to add over 4,000 residents to its population base. By comparison, the City of Llano is not expected to add residents over this period.

Table 28: Texas Water Development Board Population Forecast

Region	2010	2020	2030	2040	2050	2060
Burnet County	47,160	61,191	78,133	94,716	105,095	115,056
Llano County	21,284	23,007	23,471	23,932	24,393	24,855
Total	68,444	84,198	101,604	118,648	129,488	139,911

Source: Texas Water Development Board

Historically, a disproportionate amount of residential growth has occurred near the lakes; this trend will likely continue unless lake-related property is negatively influenced by continuing low-lake levels. Therefore, it is reasonable to assume a similar number of acres will develop around the Upper Highland Lakes between 2010 and 2060 since there are not significant land constraints. The value difference between an average acre of developed lake-related land (\$276,171) and an undeveloped lake-related acre (\$37,556) is the net increase in taxable value for the counties. If the lakes capture their share of future growth, the net increase in taxable value would rise by over \$1.4 billion. On the other hand, if the lakes remain low and growth occurs elsewhere in the county, the average acre of developed land is worth only \$124,887. Under this scenario, the net increase in taxable value would grow by \$506.4 million – much less than if it located next to the water.

Visitor Spending Growth Scenarios & Projected Economic Impact

To many observers, the current drought began in 2009 when the lake level dropped below 1,000 feet in Lake Buchanan. After a slight rebound in 2010, the lake level dropped again and has remained near 995 feet. A similar trend exists for Lake Travis. The concern for residents is that the prolonged drought will dampen long-term growth trends even after the lakes rise to the historical average level. During the public input session, business owners discussed the loss of longtime visitors who have left for other vacation spots.

State tourism datasets support the public's concerns about the slow recovery. The decline in lake levels corresponds with an immediate drop in visitor spending in the Highland Lakes region. Visitor spending fell 6.4 percent between 2008 and 2009. By comparison, the recession from 2001-2002 also reduced visitor spending but only by 3.5 percent. The major difference between the 2001-2002 and 2008-2009 declines was the amount of water in the lakes. During the 2001-2002 recession water levels were above the historic average.

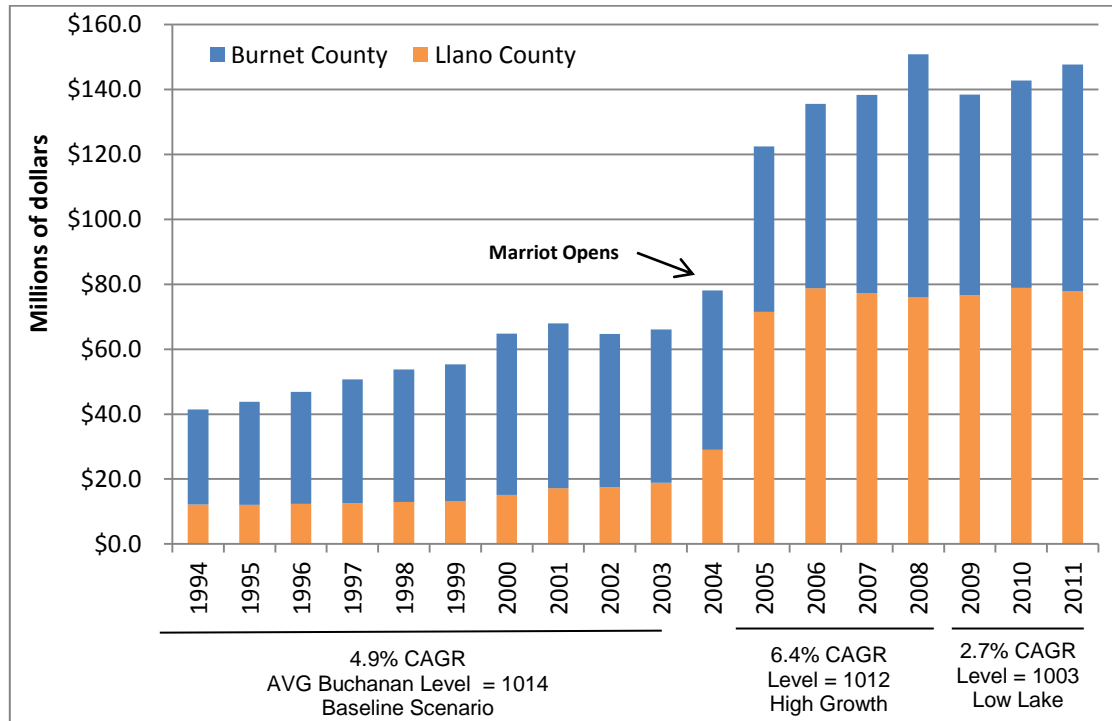
Since 2009, visitor spending has slowly rebounded to pre-drought levels, but employment and tax revenues have lagged. Much of this growth has been driven by new hotels opening and lower room rates. This rebound has been much slower than the growth rate experienced after the 2001-2002 recession. From 2002 to 2004, the two years after the economy bottomed, adjusted tourism spending grew at a CAGR of 7.4 percent. From 2009 to 2011, however, the visitor spending expanded at a CAGR of 2.7 percent.

An analysis of Marble Falls' visitor data is helpful when testing the hypothesis that lake levels have a material impact on visitor spending. Unfortunately, data is not available before 2002 from Dean Runyan Associates. From 2008 to 2009, Marble Falls visitor spending dropped 39.4 percent. Local tax receipts fell 41.4 percent and state tax receipts were 33.0 percent lower. While the two-county region has finally rebounded to 2008 levels, Marble Falls visitor spending is still down \$5.2 million with 79 fewer tourism jobs. In 2008, the estimated average daily rate for a hotel/motel room was \$93.08. The 2011 estimated average daily rate for a hotel/motel room was \$85.52.

It is important to consider how different visitor spending growth rates and assumptions impact the Upper Highland Lakes Region. Three scenarios were developed to illustrate the range of what might occur in Burnet and Llano Counties over the next 20 years. The scenarios are based on visitors spending data using metrics such as direct spending, employment, wages, and lake-related hotel revenue. Using different periods, different CAGRs were derived to forecast the key variables including local and state tax receipts. The following chart shows the timeframe used in each scenario and total visitor spending. Note, each variable had a different CAGR applied for the forecast period.

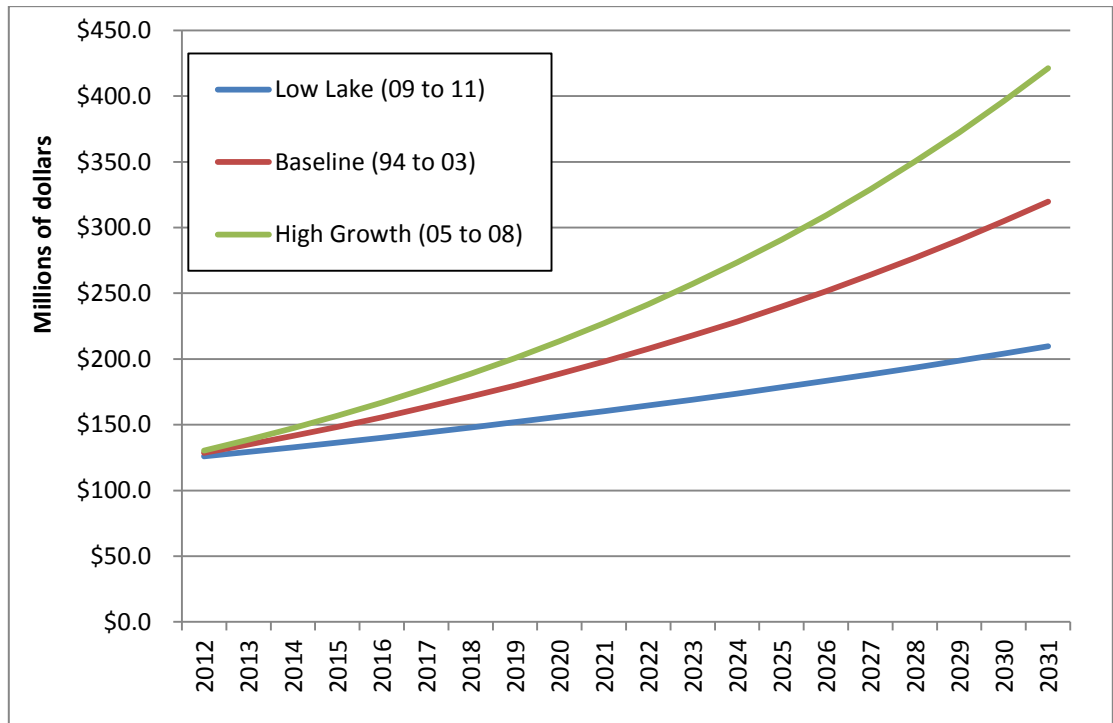
- **Low Lake Scenario** – based on the depressed visitor activity corresponding to low water levels experienced from 2009 to 2011
- **Baseline Scenario** – similar to the ten year period from 1994 to 2003 which includes the recession during the early part of the 2000s but excludes the impact of the Horseshoe Bay Marriott opening in late 2004.
- **High Growth Scenario** – extends the rapid growth created by major new projects and real estate boom from 2005 to 2008. The least likely of the three scenarios, but highlights the catalytic impact the lakes have on the region and state.

Figure 34: Lake-Related Hotel Revenue Trends and Scenarios



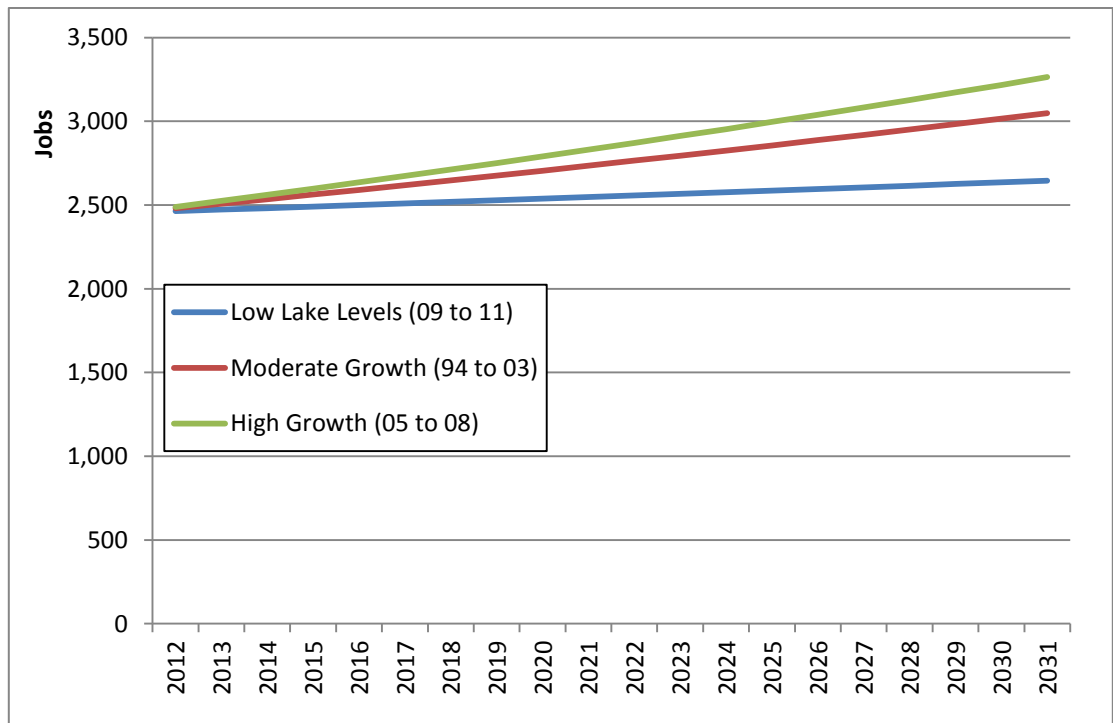
- **Visitor Spending** – Over 20 years, visitor spending under the Low Lake Scenario (\$209.7 million) is 34.4 percent lower than Baseline Scenario (\$319.8 million).
- **Employment** – Travel-generated employment for the Low Lake Scenario (2,645 jobs) is 13.2 percent smaller than Baseline Scenario (3,048).
- **State & Local Tax Receipts** – Visitor supported state and local tax revenue under the Low Lake Scenario (\$10.0 million) is 43.7 percent lower than Baseline Scenario (\$17.3million).

Figure 35: Lake-Related Visitor Spending by Scenario



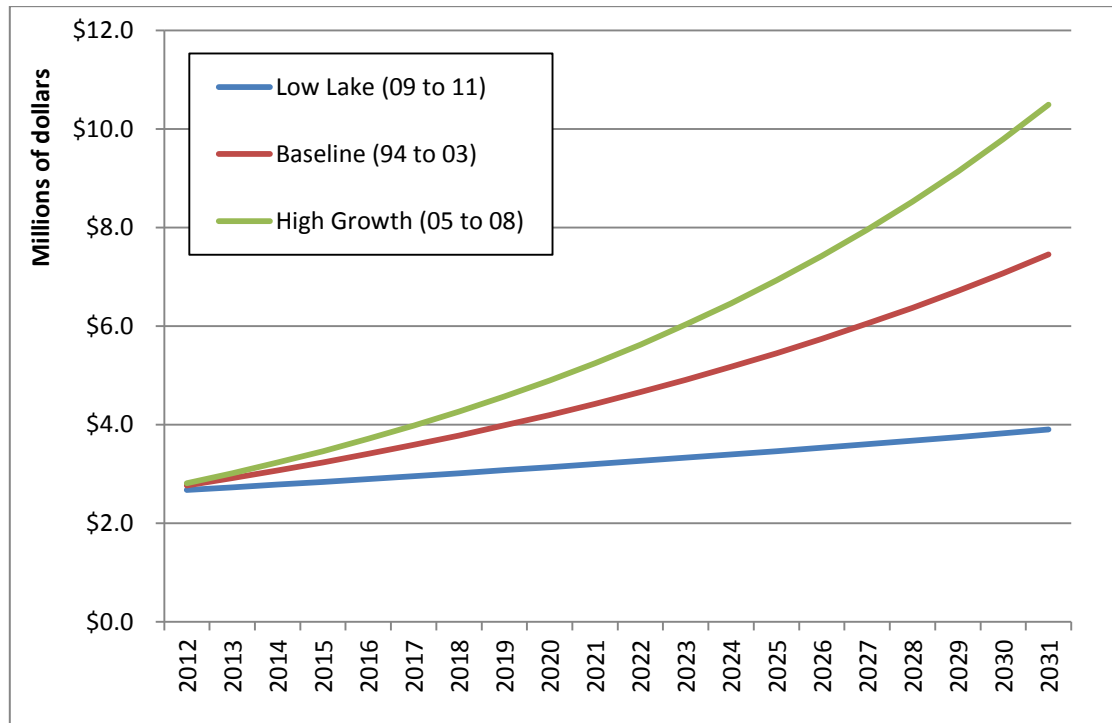
Source: TXP, Inc.

Figure 36: Lake-Related Visitor Employment by Scenario



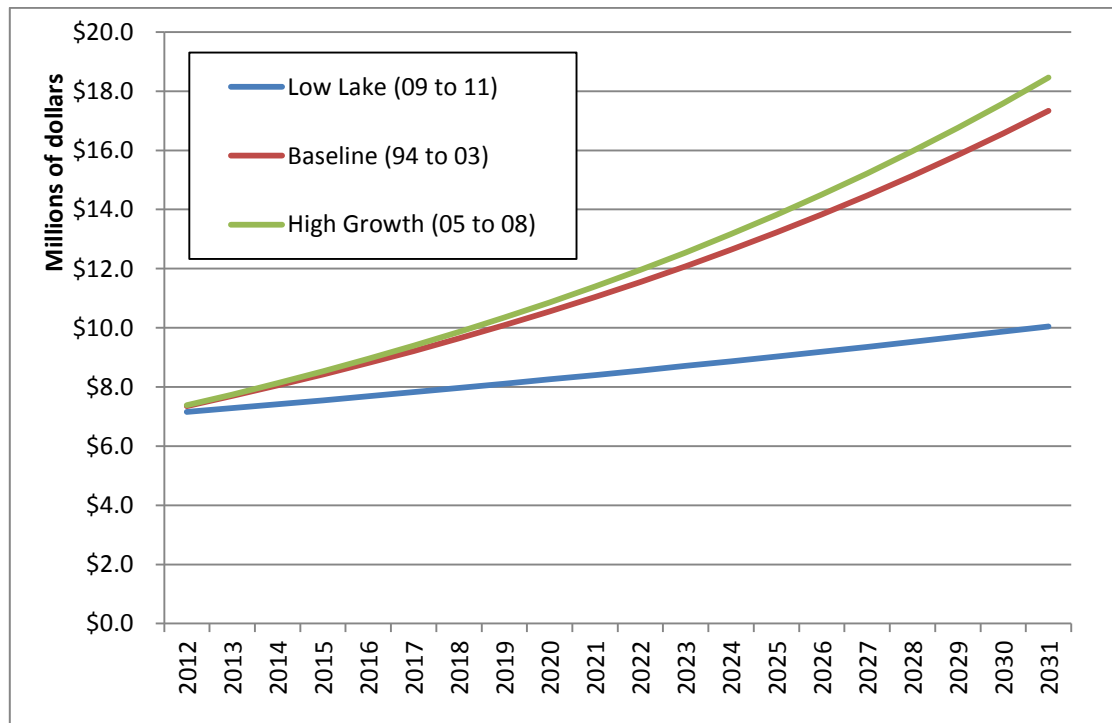
Source: TXP, Inc.

Figure 37: Lake-Related Local Tax Receipts by Scenario



Source: TXP, Inc.

Figure 38: Lake-Related State Tax Receipts by Scenario



Source: TXP, Inc.



Conclusion

The Colorado River and Highland Lakes serve as a major water source for the Texas Hill Country and downstream communities. Every community can articulate their water needs and why uncertainty creates negative consequences. For Burnet and Llano Counties, the situation is especially pointed, as the lakes are arguably the area's main economic asset. The lake-related tourism sector supports the majority of jobs in Llano County. In Burnet County, approximately 7.5 percent of county-based jobs are dependent on out-of-town visitor spending. In 2011, direct visitor spending generated over \$9.3 million in local and state tax receipts - \$7.0 million was created by lake-related activity. As a result, lake fluctuations, especially long-term droughts, have tremendous negative economic consequences for the region.

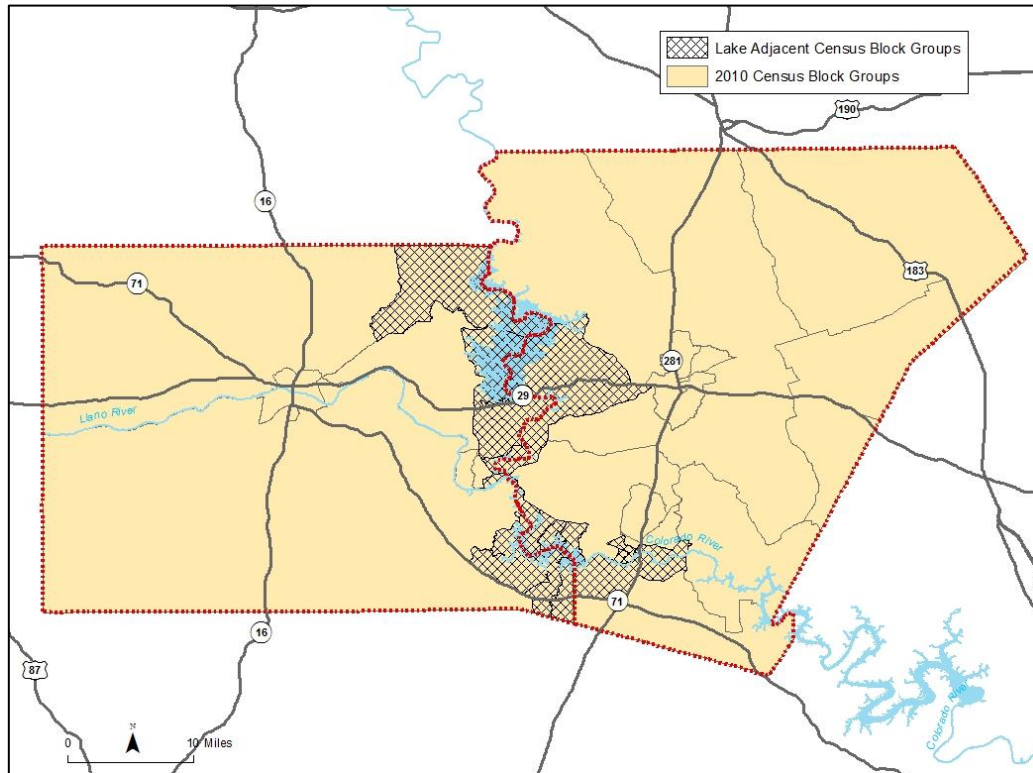
Each lake has a unique role in supporting current and future economic activity in the region. Water levels at Lake Buchanan also serve as a barometer to the overall health of the Highland Lakes. Not only do Lake Buchanan water levels directly impact adjacent businesses and residential properties, but tourists and potential residents view the lake as the leading indicator for water availability in the region. Therefore, special emphasis should be placed on mitigating Lake Buchanan water fluctuations.

Ultimately, Texas communities will need to work together to meet the statewide long-term water needs and ensure continued economic growth across the state. As part of this process, it is important to consider how water-related decisions affect the Upper Highland Lakes Region's tourism sector and overall prospects for sustained growth and prosperity. Failure to do so will have wide-ranging implications, as changes to long-term tourism sector growth rates not only impact the Burnet and Llano County economies, but the State of Texas also stands to lose millions in tax revenue over the next few decades.

Appendix 1 – Supplemental Economic & Demographic Data

The data presented in this Appendix section supplements and adds additional detail to the charts, figures, and data presented in the main body of the report.

Figure A1: Census Block Group Boundaries in the Upper Highland Lakes Region



Source: TXP, Inc.

Table A1: Number of Employed Residents by Industry by County

Industry Sector	Burnet County			Llano County		
	2000	2005	2010	2000	2005	2010
Accommodation & Food Services	1,104	1,229	1,500	470	629	423
Admin./Support & Waste Mgmt. Services	306	410	631	23	41	136
Agriculture, Forestry, Fishing & Hunting	42	35	44	20	25	24
Arts, Entertainment, & Recreation	200	200	276			596
Construction	754	975	1,016	456	405	314
Educational Services	1,004	1,446	1,341			273
Finance & Insurance	338	387	412	162	185	194
Health Care & Social Assistance	928	1,157	1,474	609	601	560
Information	181	240	247	65	29	33
Management of Companies & Enterprises			17			
Manufacturing	881	968	897	152	118	115
Mining, Quarrying, & Oil/Gas Extraction	87	101	50	8	23	8
Other Services (not Public Administration)	226	297	299	124	101	109
Professional, Scientific, & Technical Services	253	319	352	59	88	80
Public Administration	709	623	728	206	225	282
Real Estate & Rental/Leasing	120	133	171	50	60	26
Retail Trade	1,677	1,826	1,997	462	466	476
Transportation & Warehousing	143	179	204	110	47	36
Unclassified		11	9		5	
Utilities	177	176	216	156	176	137
Wholesale Trade	198	361	326	234	249	235
Total	9,328	11,072	12,204	3,364	3,472	4,054

Source: Texas Workforce Commission

Table A2: Proportion of Employed County Residents by Industry for Burnet County

Industry Sector	1990	1995	2000	2005	2011
Accommodation & Food Services	11.3%	10.4%	11.8%	11.1%	12.8%
Admin./Support & Waste Mgmt. Services	2.1%	2.7%	3.3%	3.7%	5.2%
Agriculture, Forestry, Fishing & Hunting	0.7%	0.4%	0.5%	0.3%	0.4%
Arts, Entertainment, & Recreation	2.3%	1.8%	2.1%	1.8%	2.4%
Construction	5.7%	4.9%	8.1%	8.8%	7.7%
Educational Services	0.0%	11.5%	10.8%	13.1%	10.4%
Finance & Insurance	3.9%	2.7%	3.6%	3.5%	3.3%
Health Care & Social Assistance	10.7%	11.2%	9.9%	10.4%	12.2%
Information	2.6%	1.8%	1.9%	2.2%	2.0%
Management of Companies & Enterprises	0.0%	0.0%	0.0%	0.0%	0.1%
Manufacturing	19.5%	13.1%	9.4%	8.7%	7.8%
Mining, Quarrying, & Oil/Gas Extraction	2.7%	0.8%	0.9%	0.9%	0.4%
Other Services (not Public Administration)	3.2%	2.4%	2.4%	2.7%	2.4%
Professional, Scientific, & Technical Services	1.5%	1.8%	2.7%	2.9%	3.1%
Public Administration	6.2%	7.2%	7.6%	5.6%	5.7%
Real Estate & Rental/Leasing	1.3%	1.6%	1.3%	1.2%	1.4%
Retail Trade	19.3%	19.3%	18.0%	16.5%	16.0%
Transportation & Warehousing	2.5%	2.8%	1.5%	1.6%	1.8%
Unclassified	0.0%	0.0%	0.0%	0.1%	0.1%
Utilities	2.3%	1.7%	1.9%	1.6%	1.7%
Wholesale Trade	2.3%	2.0%	2.1%	3.3%	3.0%

Source: Texas Workforce Commission

Table A3: Proportion of Employed County Residents by Industry for Llano County

Industry Sector	1990	1995	2000	2005	2011
Accommodation & Food Services	9.5%	15.5%	14.0%	18.1%	13.0%
Admin./Support & Waste Mgmt. Services	0.9%	0.8%	0.7%	1.2%	5.1%
Agriculture, Forestry, Fishing & Hunting	0.5%	0.5%	0.6%	0.7%	0.7%
Arts, Entertainment, & Recreation	0.0%	3.2%	0.0%	0.0%	0.0%
Construction	8.2%	10.1%	13.5%	11.6%	9.5%
Educational Services	0.0%	0.0%	0.0%	0.0%	0.0%
Finance & Insurance	8.4%	5.1%	4.8%	5.3%	6.2%
Health Care & Social Assistance	16.7%	19.4%	18.1%	17.3%	16.9%
Information	1.6%	1.0%	1.9%	0.8%	1.0%
Management of Companies & Enterprises	0.0%	0.0%	0.0%	0.0%	0.0%
Manufacturing	3.4%	3.2%	4.5%	3.4%	2.9%
Mining, Quarrying, & Oil/Gas Extraction	0.0%	0.9%	0.2%	0.7%	0.2%
Other Services (not Public Administration)	3.6%	3.4%	3.7%	2.9%	3.7%
Professional, Scientific, & Technical Services	3.4%	1.9%	1.8%	2.5%	2.8%
Public Administration	7.6%	5.9%	6.1%	6.5%	8.9%
Real Estate & Rental/Leasing	1.5%	1.7%	1.5%	1.7%	0.8%
Retail Trade	16.2%	13.7%	13.7%	13.4%	15.3%
Transportation & Warehousing	2.1%	1.1%	3.3%	1.4%	1.1%
Unclassified	0.0%	0.0%	0.0%	0.1%	0.0%
Utilities	7.1%	5.4%	4.6%	5.1%	4.2%
Wholesale Trade	9.3%	7.4%	6.9%	7.2%	7.5%

Source: Texas Workforce Commission

Table A4: 2011 Taxable Value by Lake (in Millions of Dollars) in Burnet County

Section	Buchanan	Inks	LBJ	Marble Falls	Travis	All Lakes
Water Adjacent	\$209.9	\$41.5	\$929.4	\$96.9	\$90.3	\$1,367.9
Water View	\$24.9	\$7.5	\$163.4	\$0.1	\$4.8	\$200.7
Total Lake Related	\$234.7	\$49.0	\$1,092.8	\$97.0	\$95.1	\$1,568.6
LR as % County Total	6.0%	1.3%	28.1%	2.5%	2.4%	40.3%

Source: Burnet Central Appraisal District

Table A5: 2011 Taxable Value by Lake (in Millions of Dollars) in Llano County

Section	Buchanan	Inks	LBJ	Marble Falls	Travis	All Lakes
Water Adjacent	\$156.5	\$28.1	\$1,374.4	\$0.0	\$0.0	\$1,559.0
Water View	\$28.3	\$2.6	\$100.6	\$0.0	\$0.0	\$131.5
Total Lake Related	\$184.8	\$30.7	\$1,475.1	\$0.0	\$0.0	\$1,690.5
LR as % County Total	6.0%	1.0%	47.8%	0.0%	0.0%	54.8%

Source: Llano Central Appraisal District

Table A6: 2011 Average Taxable Value (per Acre) by Property Type in Lake-Related Parcels

Type of Property	Burnet County			Llano County		
	Number of Parcels	2011 Av. Taxable Value	Total Acreage	Number of Parcels	2011 Av. Taxable Value	Total Acreage
Single Family Res.	4,310	\$226,538	6,429	3,637	\$862,463	1,729
Multi-Family Res.	2	\$391,396	1	54	\$3,184,046	8
Commercial	146	\$11,315	2,117	128	\$56,924	717
Undeveloped	2,885	\$33,494	2,536	1,979	\$40,714	3,263
Other	659	\$608	4,936	27	\$0	37
Total	8,002	\$97,922	16,019	5,825	\$542,754	5,755

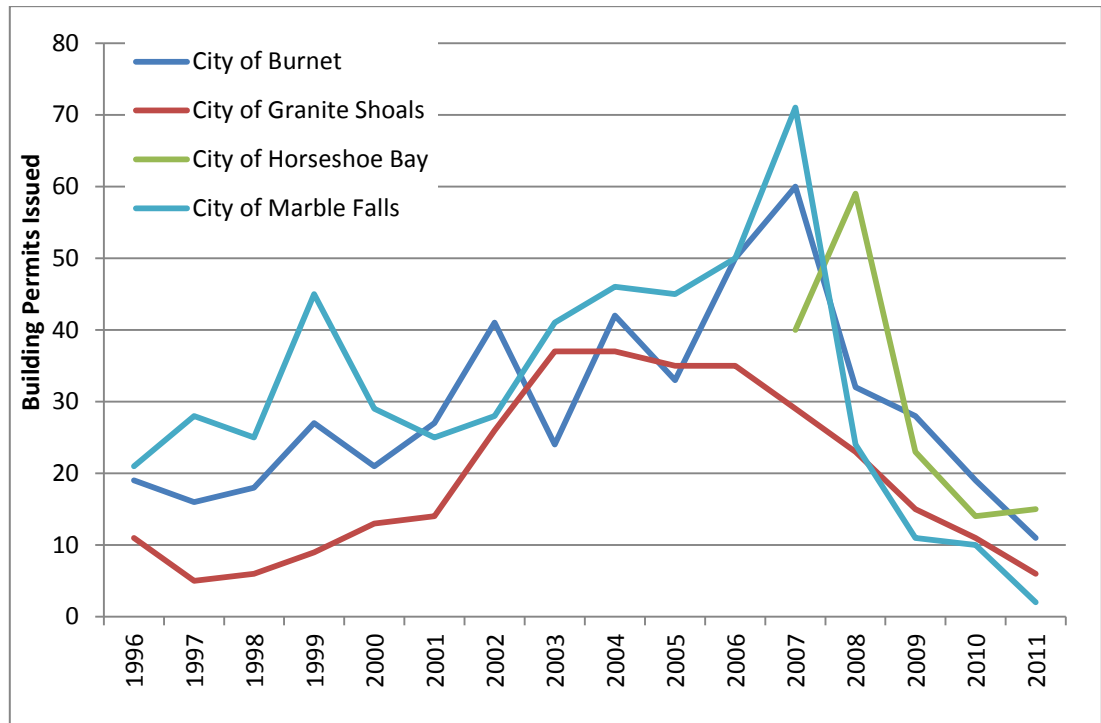
Source: Burnet Central Appraisal District and Llano Central Appraisal District

Table A7: 2011 Average Taxable Value (per Acre) by Property Type in all Parcels

Type of Property	Burnet County			Llano County		
	Number of Parcels	2011 Av. Taxable Value	Total Acreage	Number of Parcels	2011 Av. Taxable Value	Total Acreage
Single Family Res.	14,840	\$132,035	19,724	10,214	\$229,351	7,639
Multi-Family Res.	204	\$275,421	128	297	\$190,078	68
Commercial	1,770	\$24,827	15,500	768	\$216,115	1,696
Undeveloped	27,304	\$1,511	567,401	20,554	\$25,348	495,594
Other	4,090	\$244	29,165	181	\$0	875
Total	48,208	\$6,154	631,918	32,014	\$96,396	505,872

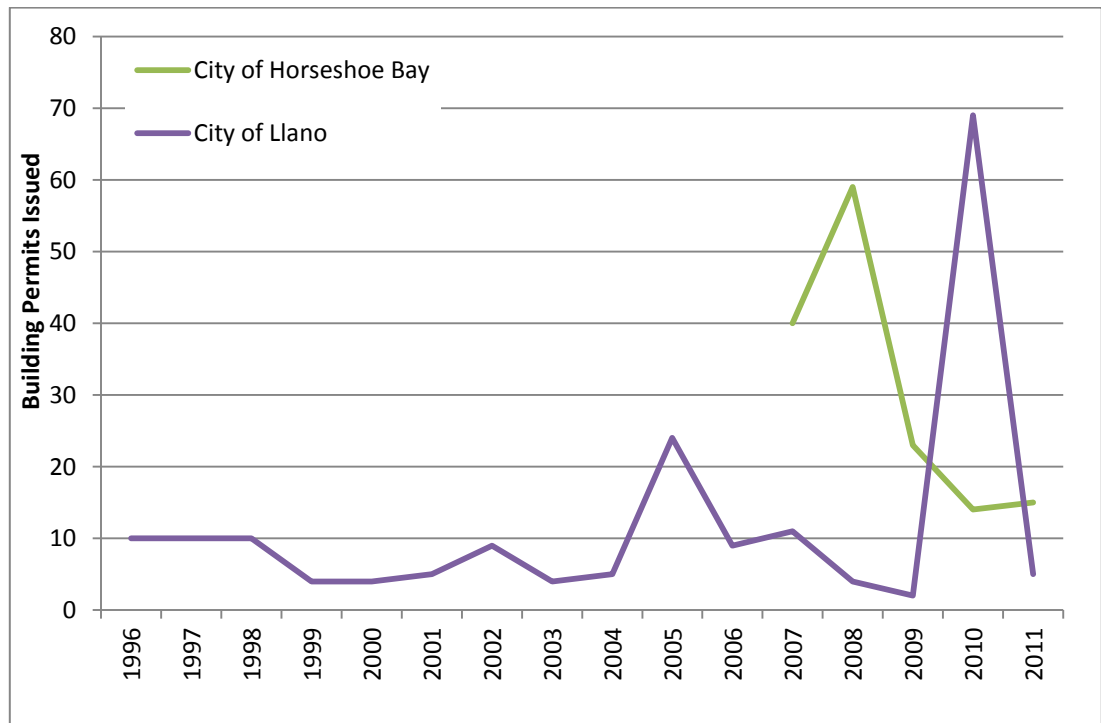
Source: Burnet Central Appraisal District and Llano Central Appraisal District

Figure A2: Building Permits Issued for Single Family Homes by City in Burnet County



Source: Censtats Building Permits Data, Census Bureau
 *Data for Horseshoe Bay before 2007 is unavailable

Figure A3: Building Permits Issued for Single Family Homes by City in Llano County



Source: Censtats Building Permits Data, Census Bureau
 *Data for Kingsland and Horseshoe Bay, before 2007, is unavailable

Appendix 2 – Summary of Focus Group Input

Effects on Businesses

Many of the focus group participants were local business owners and of these, the majority owned and operated businesses related to the lakes and lake-related tourism. The direct impact of the recent drought and subsequent lower lake levels on their business operation was foremost in these participants' minds and their comments reflected this. Many indicated that, though they had experience with fluctuating lake levels and had even lived through a number of previous droughts, the lake levels were consistently lower, over the past few years, than they ever had been before. One participant offered his own personal research into the extent of the current low lake levels. Based on historic lake fluctuation patterns for the past fifty years, the current extremely low lake levels should occur in about 2 percent of a 50-year period. However, since 2007, these unusually low levels have been the norm more than 50 percent of the time. Individual participants offered the following specific comments on the impact of the low lake levels on their businesses and other businesses in the area:

- Media and negative publicity is having a big impact; even with more water this year, the public still perceives there is no water in the area.
- During serious drought and low lake levels, the area sees a 50 to 80 percent decline in activity.
- Fishing guides must have access to the water (which can require an investment in longer boat ramps) in order to stay in business.
- Most are concerned that even when they have water again, the regulars that have stopped coming to the area during the low lake levels will not return. Instead, they will have found a different location for their boating, fishing, etc.
- One participant that owns lodging on the lake had a family reunion that visited every year and rented 23 cabins, but have stopped coming now due to the lower lake levels.
- One development on Lake Buchanan shows lot sales directly affected by the lake levels: several lots sold in 2007 and 2008, no sales in 2009, 6 lots sold in 2010, and no sales in 2011 and 2012. The development owner cut the lot price in half from the initial listing price and is still unable to sell lots. Local realtors indicated that this will likely have a significant impact on future development around the lakes.
- One participant owns storage units and has historically been full, but since lake levels have been so low, there has been a 30 percent or more reduction in occupancy.
- Realtors in the area have seen a large decrease in the value of homes and purchases.
- The area has not had water for 4 out of the last 6 years; this has caused even the long-time, regular tourists to be wary of the lack of water and change their travel plans.
- One participant sells boats on consignment and noted that the only sales are to people outside of the area who are coming here because they can get a deal.

- A participant based on Lake LBJ has seen an increase in business, though the first question people ask is “Is there water?”
- Participants have not noticed an effect on hunters that visited the area.

Effects on Quality of Life

The anecdotal evidence offered by focus group participants was overwhelmingly negative with regard to the impact of the low lake levels on their lives. A pervasive sentiment was that the lake levels had cost many residents and business owners quite a bit in terms of lost revenue or declining property values. Many participants indicated that they were willing to wait for lake levels to return, but only to recoup the investment in their property and business holdings. These participants stated that they wanted to sell and relocate to a different area, which was less affected by lake fluctuations. Additionally, there was a widespread agreement among participants that low lake levels do not impact just lake-related businesses or individuals with property right on the lake. Rather, the entire area is impacted by the decline in visitors and general economic activity. Individual participants offered the following specific comments on the impact of the low lake levels on the quality of life in the area:

- Several noted that when they make money, they spend money in this area.
- One participant worried that if 50 percent of taxable value comes from waterfront lots, the lack of revenue from declining property values will have to be made up and therefore tax rates throughout the County will increase dramatically.
- Several commented on the lower amounts of sales tax they are generating.
- One participant commented that schools in Burnet are facing a budget crisis partially due to the lower property tax revenue.
- Several stated how desirable it is to live near water in such a hot, humid climate and how much more desirable the area was before the lower lake levels.
- Participants indicated that it was not only the weather cycles that were causing the consistent low lake levels, but also the existing policies and priorities of the LCRA.
- People feel trapped there because they cannot sell their homes.
- A participant commented that for retirees in the area who chose this location for its proximity to the lake and other natural resources, the consistently lower lake levels have been particularly frustrating.

Effects of Lower Lake Levels Compared to the Overall Economic Climate

For the most part, the focus group participants agreed that the recent downturn in economic activity and overall quality of life was more the result of the lower lake levels than the economy. Even so, the underlying impact of the slower economy and the effect it had on local business was universally recognized. However, participants indicated that the affordable nature of lake-related tourism should have smoothed out any decline in demand due to the recession, if the lake levels had not been low at the same time. Individual

participants offered the following specific comments on the comparative impact of the low lake levels and the national economy on the area:

- Several participants noted that people travel to lakes when they do not have as much money to spend on leisure travel.
- Several indicated that the wealthier crowd would have continued to upgrade homes and boats if there was water.
- One participant stated “going to the lake is one of the cheapest forms of family entertainment.”
- One participant noted that Kingsland has a lodging establishment for sale and they are not able to sell because of the economy.
- One fishing guide noted that he is not seeing as many customers employed in the construction sector as he used to and is now working toward a more family-oriented business.

Effects on the Environment

Focus group participants emphasized the environmental impact of the regards to growth of Salt Cedar trees in the currently dry areas of the lakes more than any other environmental impact of the lower lake levels. It was stated that 500 to 1000 trees can grow per acre and that each tree uses 500 gallons of water per day. One participant indicated that contacting LCRA revealed that the LCRA had no current plans to deal with the rapid growth, nor were they able to indicate another governmental agency who could address this issue. The participants stated that addressing the rapid growth of the Salt Cedar, either through removal or retardation of additional growth, would have a significant impact on water levels as they returned. Individual participants offered the following specific comments on the impact of the low lake levels on the natural environment in the area:

- Salt Cedar is growing rapidly.
- There is an increased risk of Golden Algae because the water is lower and therefore hotter for a longer period of time.
- Older Oak Trees and Indian Trees in the area have been damaged.
- Participants indicated a need for a water code that considers all potentially impacted wildlife. The Matagorda Bay Evaluation Study was cited as supporting this assessment.
- There will be a significant impact on all flora and fauna in and around the lakes due to the higher concentration of nutrients and change in temperature.

Fluctuations in Lake-related Activity throughout the Year

The majority of focus groups participants stated that early spring through late summer (approximately spring break to Labor Day) was the most important time to have higher lake levels as it related to their businesses. Some participants stated that once the wildflowers bloom is when the tourists start to visit. On the other hand, the local parks indicated that

they are seeing visitors in the mild winter months. Fishing guides asserted that they are busiest March through July and then again in October, as the “fish don’t bite when it is too hot.” Taking all of the focus group input together, it was clear that all but the coldest winter months are important for lake-related tourism and economic activity.

Biggest Concerns and Ideas for Solutions

The biggest concerns voiced by participants was that the area will never recover from this most recent longer period of lower lake levels. Many participants mentioned the policy goals and priorities of the LCRA and their management of the lakes and the lake levels. Comparisons were made to Canyon Lake, which has previously experienced fluctuating lake levels and through working with senators and the GBRA, practices were changed to maintain the lake at a more consistent level. Focus group participants also offered a number of potential solutions for issues related to the lower lake levels, as well as potential changes to the way in which the lakes and their water levels are managed overall.

Overall concerns voiced by focus group participants:

- Future access to drinking water
- Comparing the economic impact of the rice farmers with the economic activity related to the Lakes and sharing this information with policy makers
- Potential demand for water to the north of the area and the impact of this on the region
- LCRA policy-making process

Potential solutions heard from focus group participants:

- Focus on changes related to legislation
- Increase efforts for conservation education
- Provide better access to the water, including longer boat ramps
- Provide better forecasting of lake levels, possibly including a fixed operating range, so that businesses can modify their business plan as necessary
- Evaluate effective management systems
- Advertise the continued operation of many lake-related businesses and tourism opportunities to combat negative publicity
- Increased public representation in LCRA policy-making

Appendix 3 – Summary of Survey Results

Figure A4: Description of Personal Interaction with the Lakes

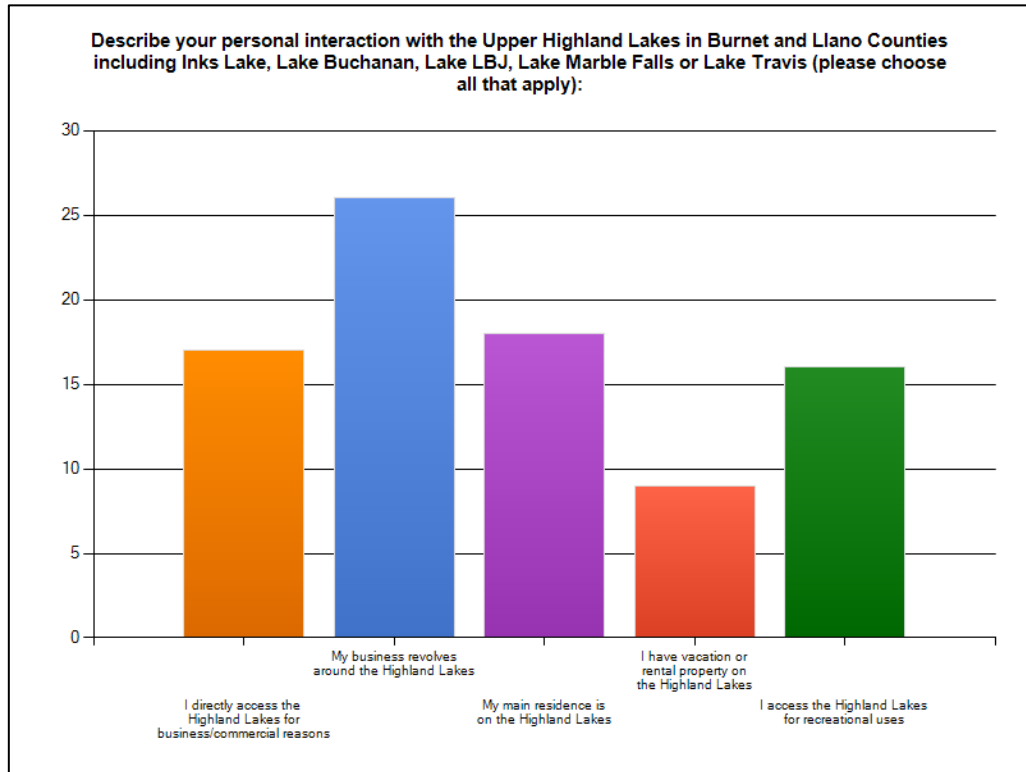


Figure A5: Respondents with Businesses Related to the Highland Lakes

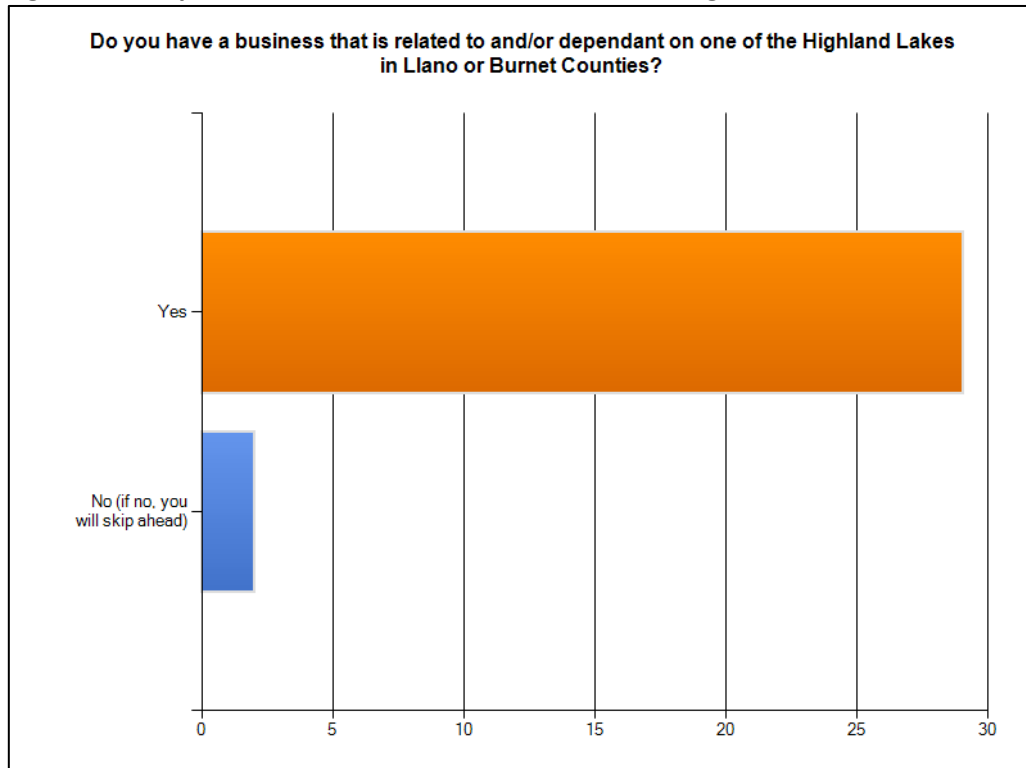


Figure A6: Lake Accessed for Business Use

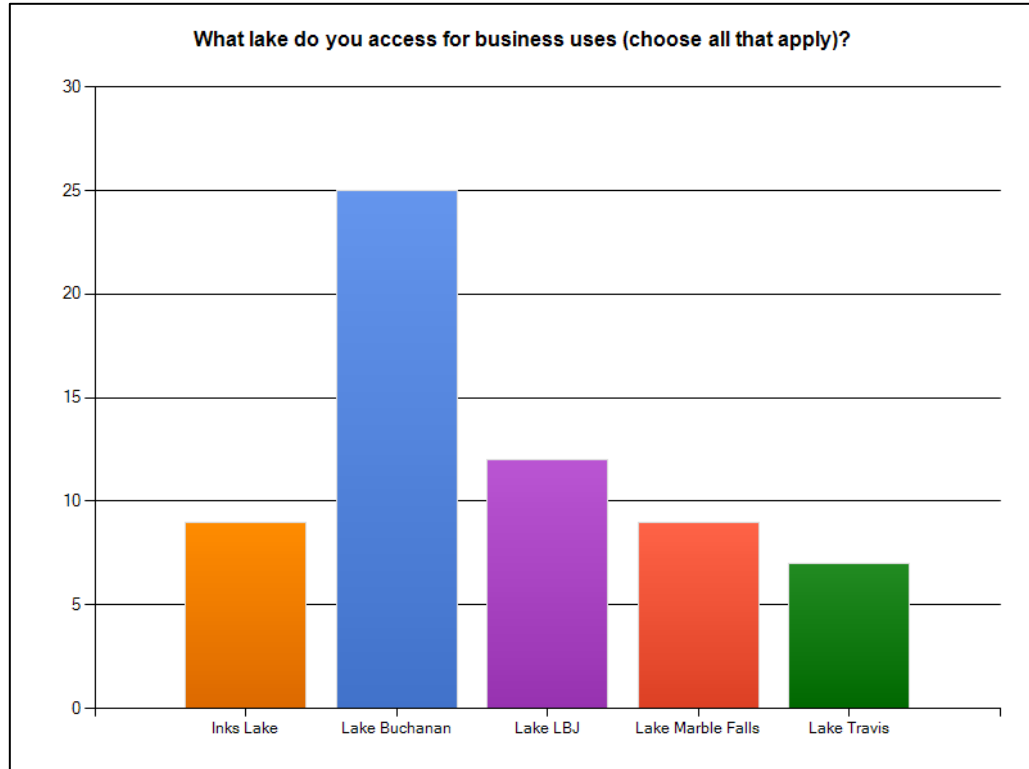


Figure A7: Lake-Related Business Description

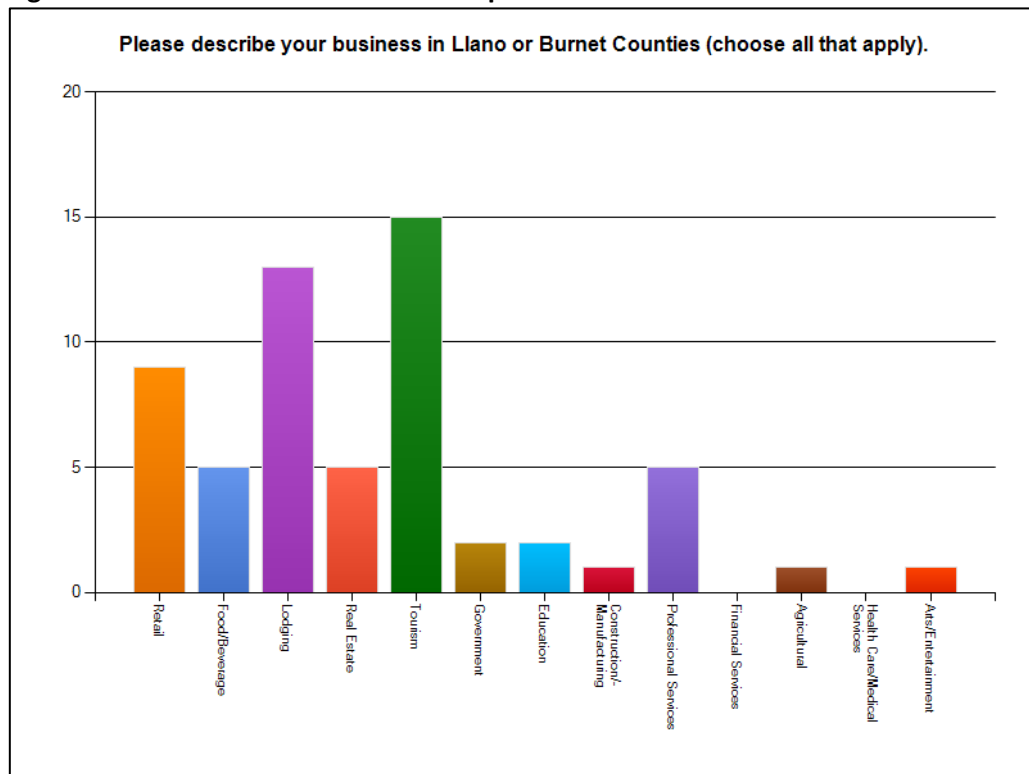


Figure A8: Impact of a 10-Percent Decrease in Lake Levels

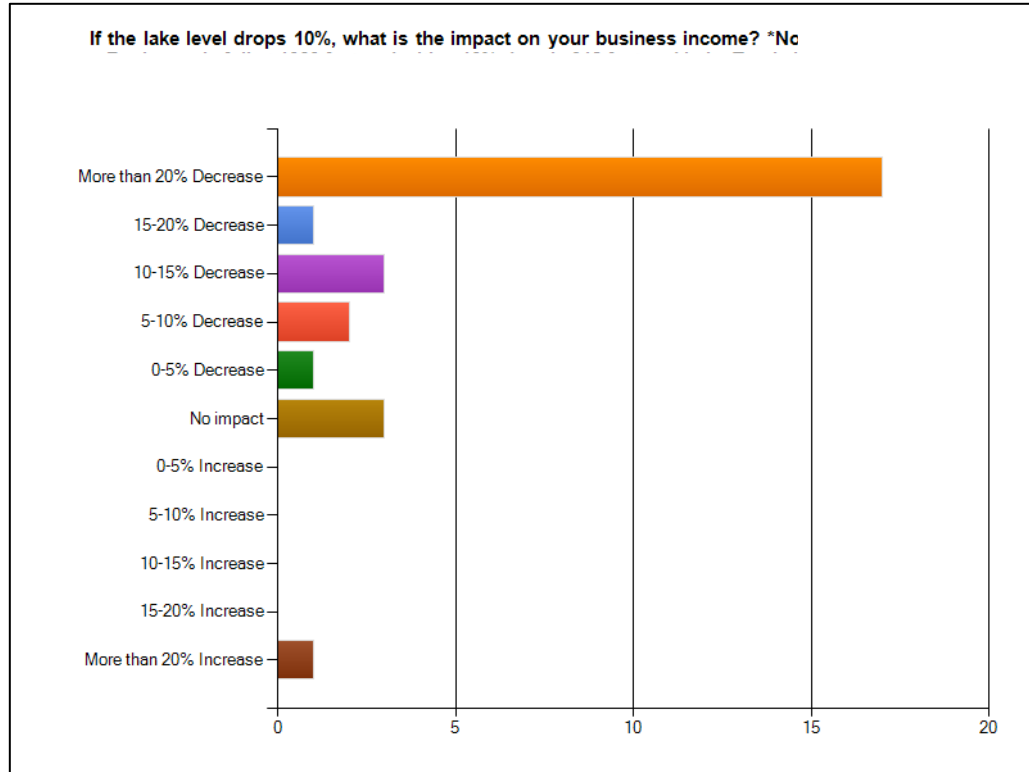


Figure A9: Impact of a 20-Percent Decrease in Lake Levels

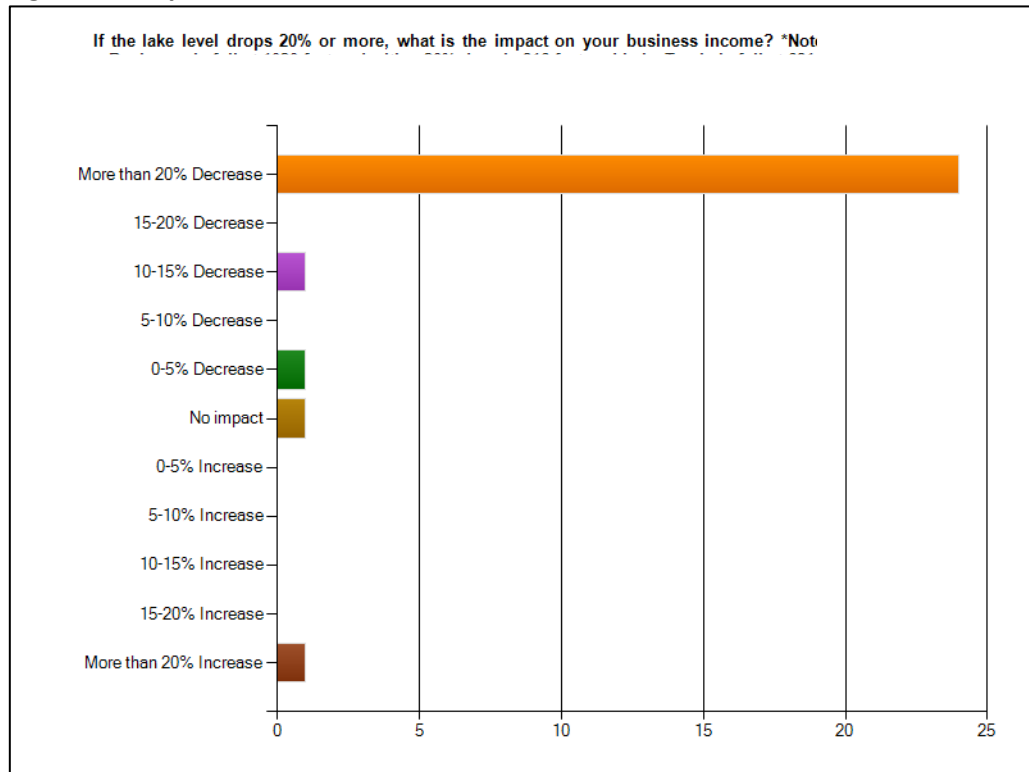


Figure A10: Impact of the Drought on Business Structure

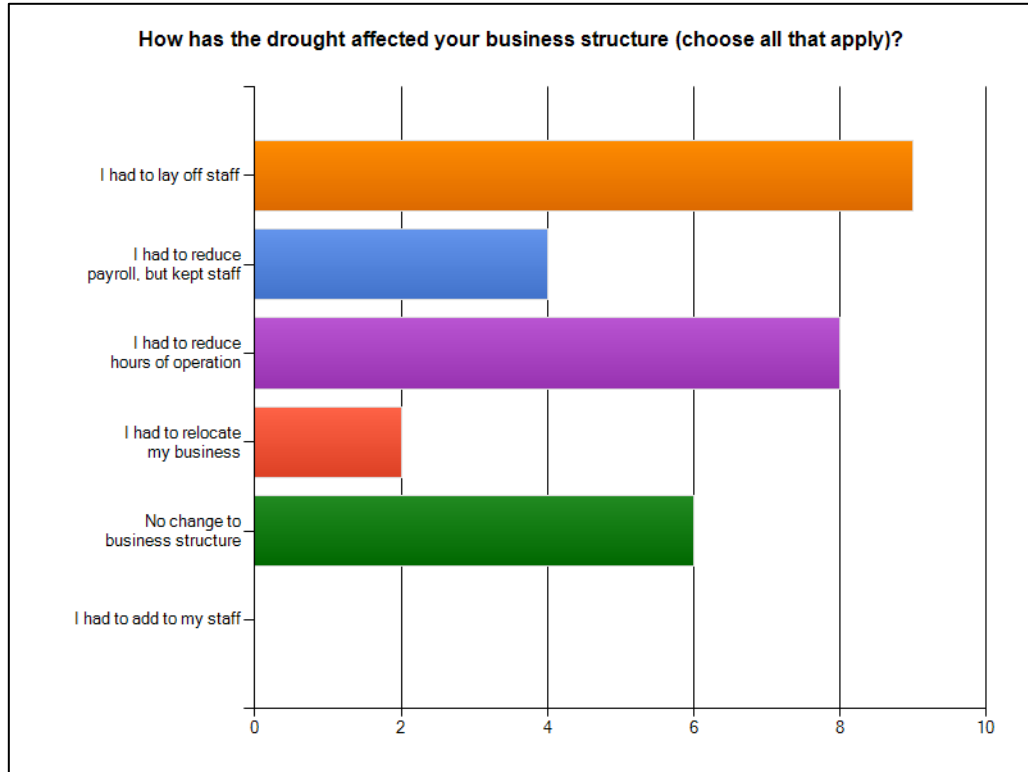


Figure A11: Respondents Considering Moving Their Businesses

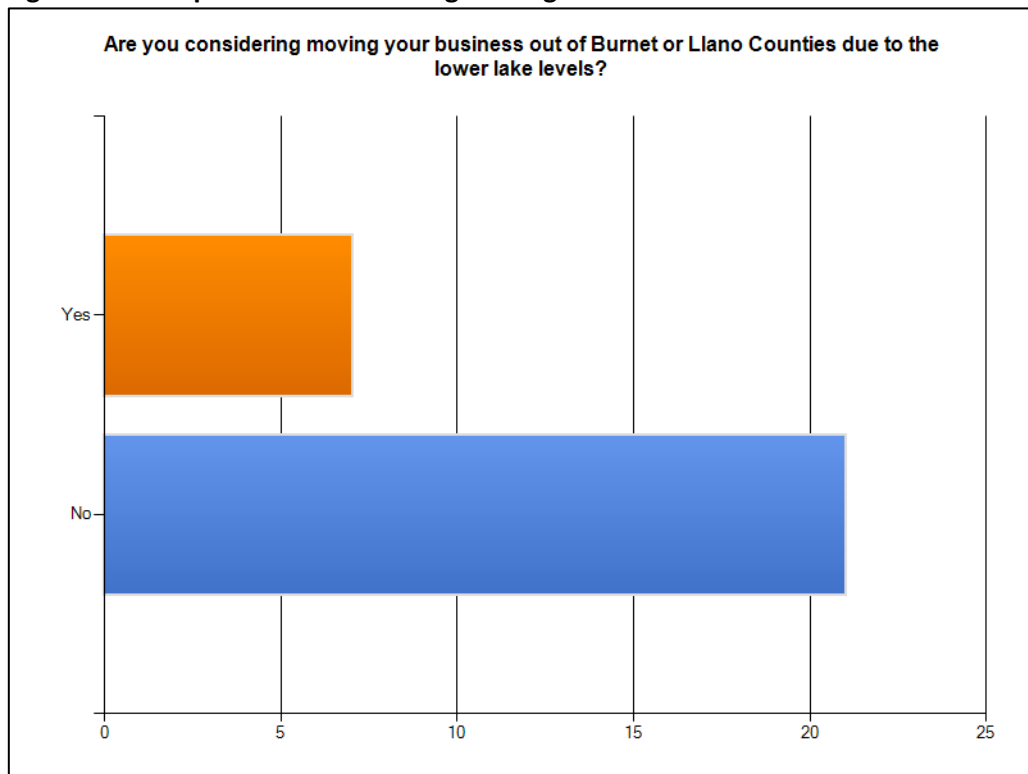


Figure A12: Types of Taxes Paid

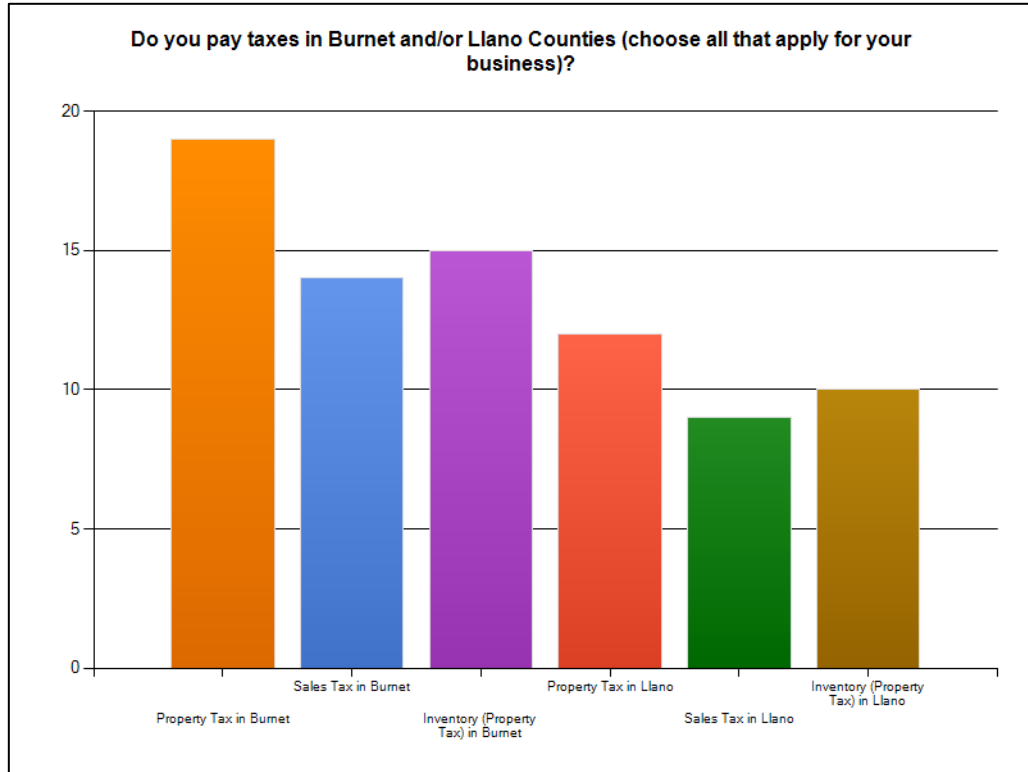


Figure A13: Businesses That Export Outside of the Upper Highland Lakes Region

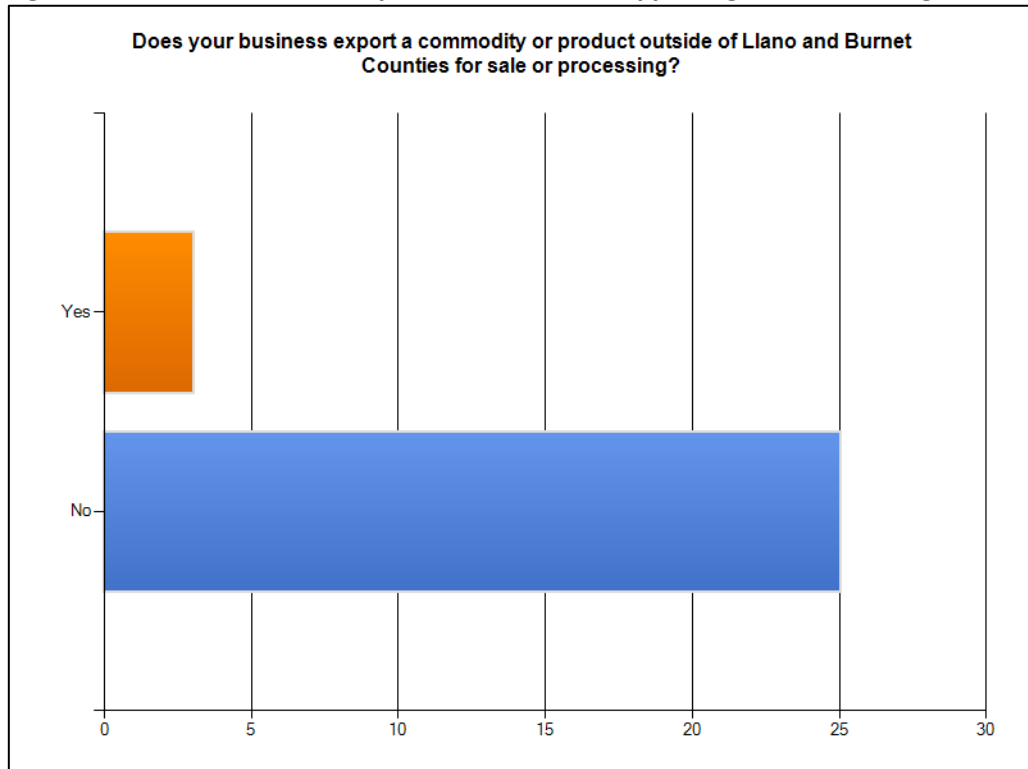


Figure A14: Personal Use of the Upper Highland Lakes

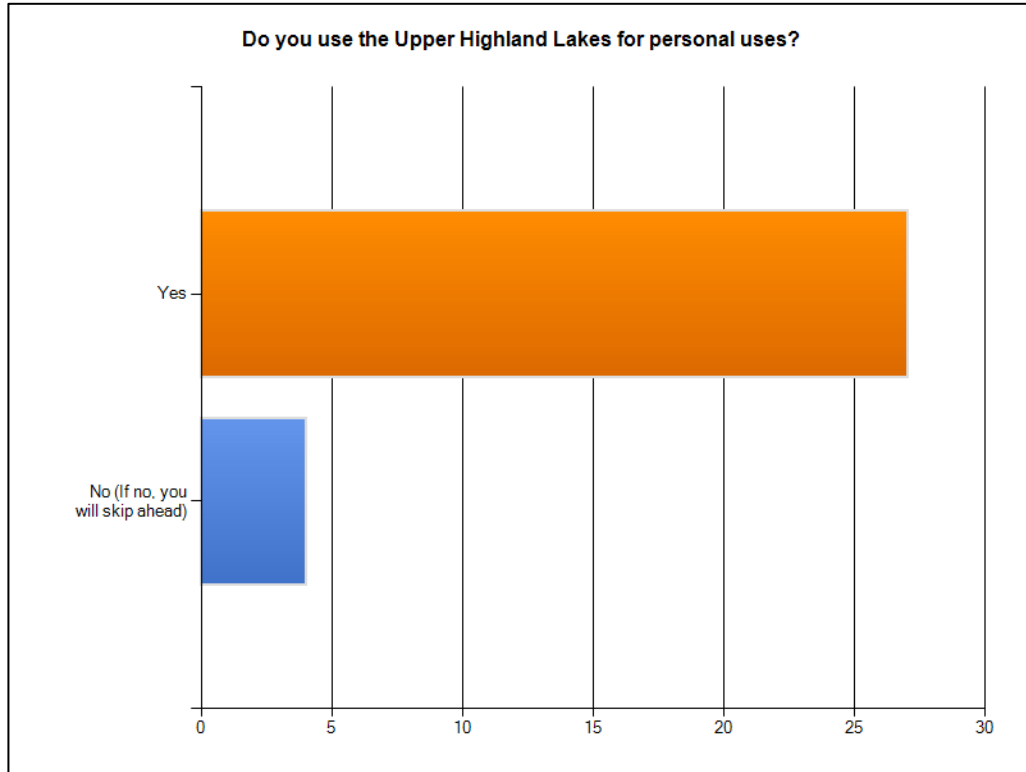


Figure A15: Lake Accessed for Personal Use

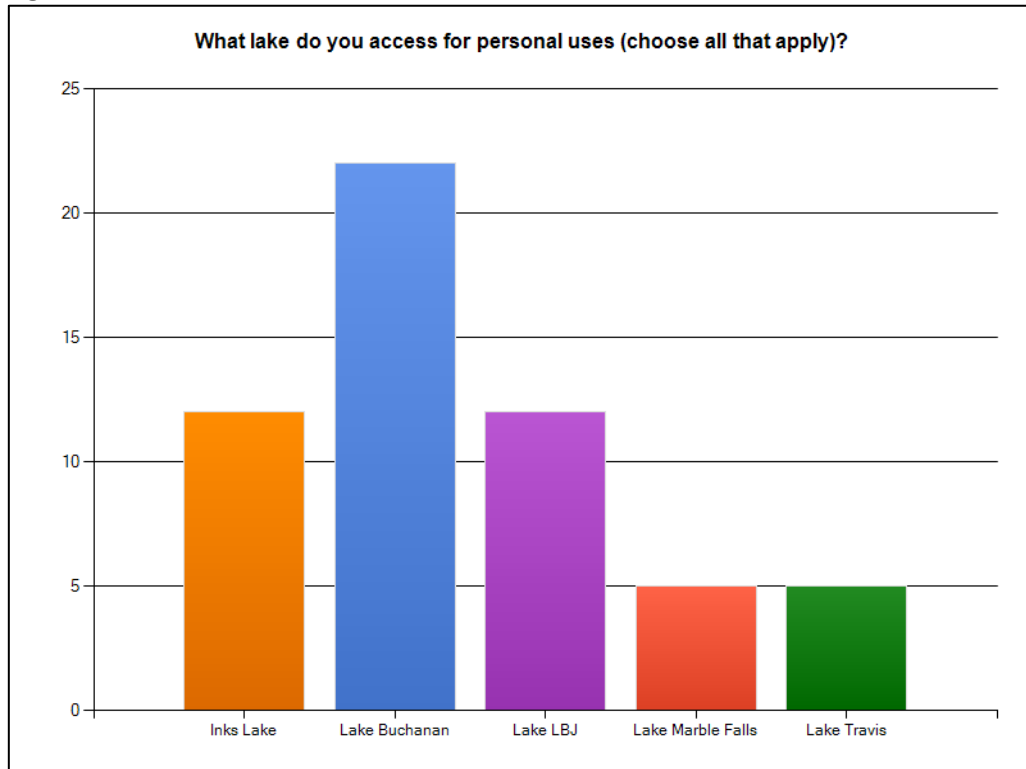


Figure A16: Ownership of a Boat Dock or Slip

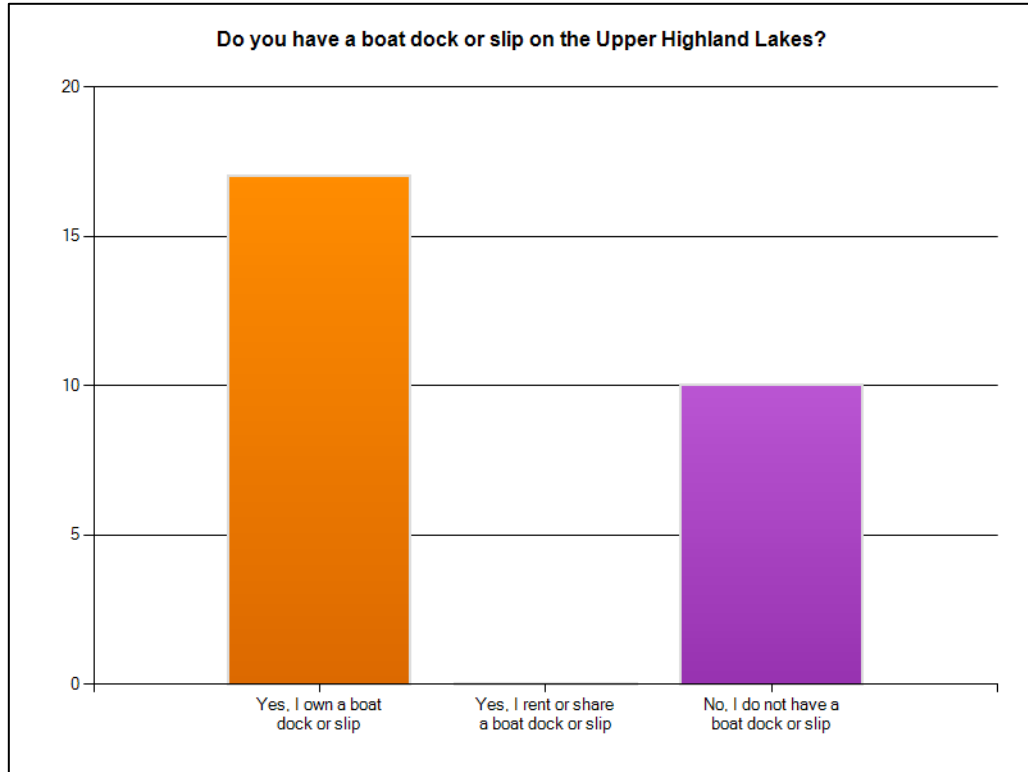


Figure A17: Impact of Lower Lake Levels on Leisure Activities

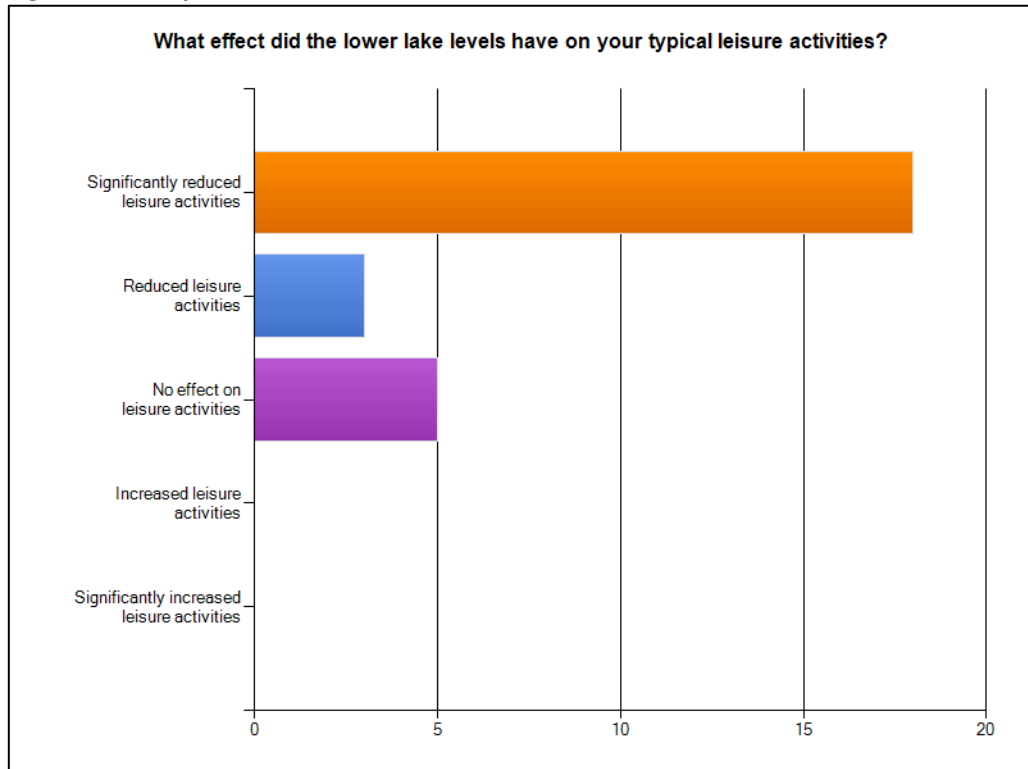


Figure A18: Impact of Lower Lake Levels on Community Facilities

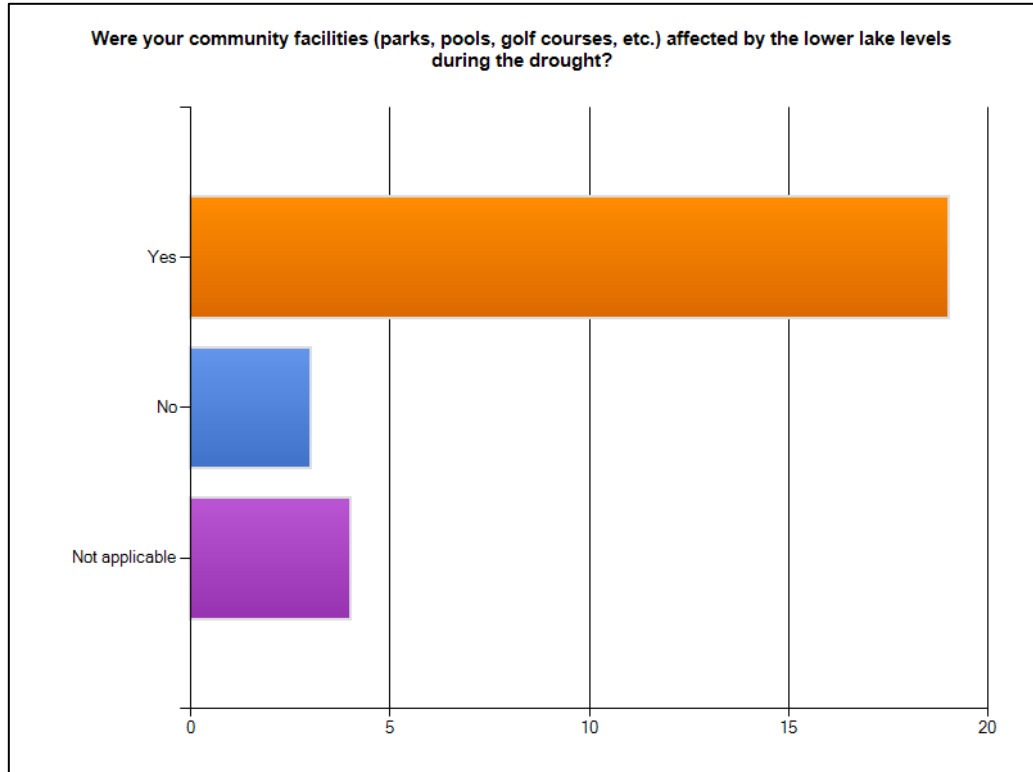


Figure A19: Impact of Lower Lake Levels on Spending by Part-Time Residents

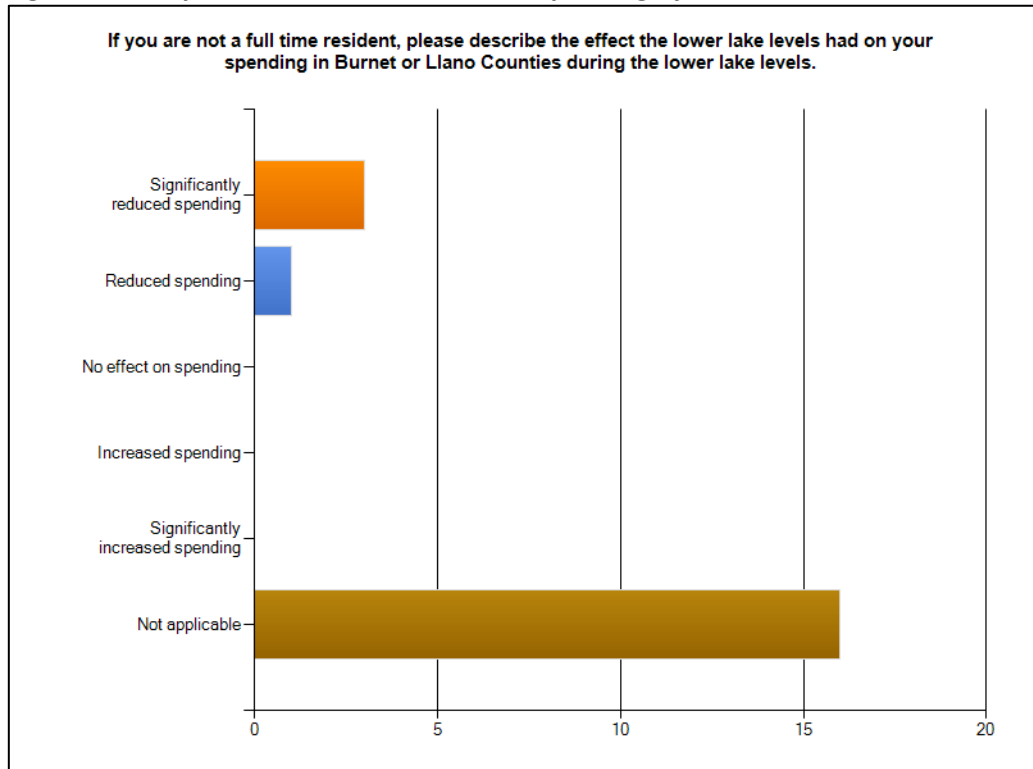
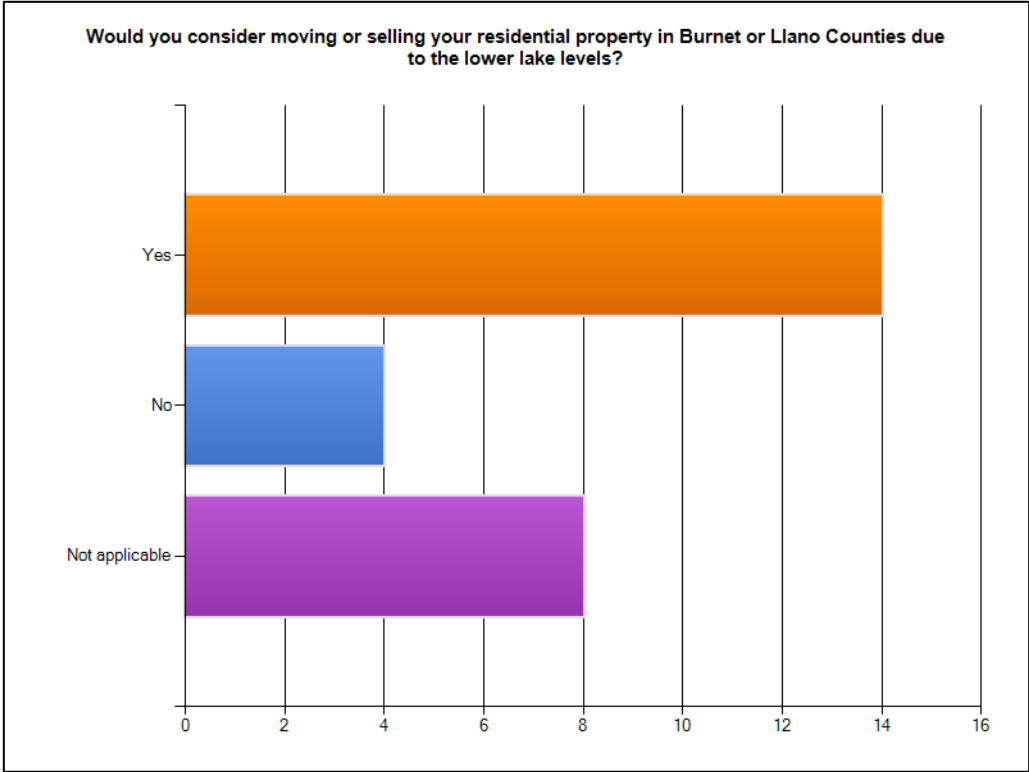


Figure A20: Respondents Considering Moving or Selling Residential Property





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