CALDWELL BURLESON COUNTY

STATE OF COMMUNITY REPORT

September 2020

Executive Summary

Burleson County, Texas is located in the middle of the Texas Triangle between Houston, Dallas/ Fort Worth, Austin, and San Antonio. The county lies just west of the Bryan/ College Station area. The City of Caldwell is the county seat, a small rural community about 25 miles west of Bryan and College Station. The community has grown over the past couple of years due to the Eagle Ford Shale oil boom, and due to its location in the fast-growing Brazos Valley, Caldwell is expecting more growth. Caldwell's blend of Texan, Czech, and other cultures plus its setting among fertile farmland, rolling hills, and Post Oak forests have equipped it with a range of natural and cultural assets.

Burleson County served as the nexus of several important trade routes linking the Antebellum South to the Western Frontier in its early post-indigenous history and remains an area with tremendous potential, located at the crossroads of multiple transportation modes. While its population peaked in the early 20th century, Burleson County maintains a strong agricultural economy and three incorporated municipalities which have become increasingly urbanized since the mid-1900s. Caldwell was founded in 1840 when the Texas Congress annexed to Milam County all of Washington County north of Yegua Creek and west of the Brazos River. Named after Matthew Caldwell, the town was surveyed by George B. Erath parallel to the Old San Antonio Road (OSR) and west of Davidson Creek. In 1880 the Gulf, Colorado and Santa Fe Railway built its main line through Caldwell and located the depot a half-mile from the courthouse square. The city soon became an important shipping point for the county. Caldwell was incorporated in 1891 with a mayor-council form of government. In 1912 the Houston and Texas Central, now Southern Pacific Railway, built a freight and passenger rail line from Hearne through Caldwell to Flatonia, where it joined a line to the west coast.

The population of Caldwell remained relatively stable from 1940 to the 1970s at just over 2,000. Caldwell's population had increased to 3,449 by 2000, driven by the economic bases of oil, agriculture, and livestock. Today, Caldwell has reached an estimated population of almost 4,400. Population projections for the county show continued growth over the coming decades, given the county's relatively high birth rate, and that this new generation will be the most diverse in the history of the county.

Poverty is slightly more prevalent in the City of Caldwell than the Texas average. Educational attainment is significantly lower than the national average across most metrics in Caldwell, although not unusual for rural Texas cities. With low rates of bachelor's degrees in the county, there are more individuals who lack a high school diploma then have attained a bachelor's degree. In years to come,

this could pose challenges for the growing youth population in Burleson County in finding a job outside of agriculture or retail.

Caldwell includes 18% of Burleson County's housing units. Caldwell's housing stock has grown gradually in recent decades, with a high of 35 building permits issued for single-family homes in 2012 and a low of one permit in 2015. Since 2010, there has been proportionally less housing construction in Caldwell and Burleson County than across Texas as a whole, reflecting lower population growth in rural areas as compared to major urban areas. Households in Caldwell and Burleson County show greater permanence than the Texas average, with the average household moving into their current residence before 2010. The most common housing type was single-family detached, comprising roughly two-thirds of housing units in both Caldwell and Burleson County. However, the composition of housing stock was substantially different, with more multi-family housing in Caldwell and more mobile homes in Burleson County. In Caldwell roughly 10% of homes are reported as vacant, and owner-occupied housing units make up a little over 60% of occupied dwellings. Very few units on the rental market were unoccupied in Caldwell. Nominal housing costs in Caldwell and Burleson County are below the Texas average, including both ownership costs and rents. However, ongoing costs of housing are higher in Caldwell than the rest of the county.

One of Burleson County's most important natural resources is the Wilcox-Carrizo aquifer. Burleson County has a significant portion of the remaining water resources of this long belt of underground drinking water, while its water demand is not projected to increase at any point within the coming fifty years. With its significant watershed, Post Oak Prairie habitat and existing wetlands, Burleson County also has the potential to become a significant ecological conservation site, especially for the several dozen endangered animals and plant species that are native to the region. In terms of natural hazards, Caldwell is at lower risk from hurricanes than coastal Texas communities, but significant portions of the two state highways passing through the city are located within the 100-year flood zone. The city is also at minor but nonzero risk of significant fires.

Caldwell maintains its strategic location at the junction of several trade and transportation networks, with significant amounts of road and rail-based freight passing through the county. State Highways 21 and 36 direct traffic from Mexico and the Gulf Coast through the Texas Triangle and eventually to Louisiana and Abilene. The significant rail infrastructure handles freight from all corners of the Texas Triangle. As in most Texan communities, most commuters in Caldwell drive alone, although about 1 in 5 carpools. Caldwell exhibits medium-low walkability and bikeability scores and has no regular fixed-route public transit.

Caldwell ISD school facilities generally meet or exceed Texas's educational benchmarks, with an overall 'B' grade from the Texas Education Agency. Caldwell has a police department and a volunteer fire department. There is a municipal utility department and ample groundwater. Caldwell maintains the Harrie P. Woodson Memorial Library, established in 1976, and is a member of the Texas Library System. The City owns and maintains a municipal airport, dedicated in 1968, which has hangers for rent and a courtesy car provided by the city for visitors to use who fly into Caldwell. There are five parks, with walking trails and ponds; baseball, softball and soccer fields; tennis and basketball courts; pavilions and a splash pad. Caldwell has St. Joseph's CHI hospital, a senior center in the downtown, and a civic center/visitor center to host events and meetings and a few museums. As the "Kolache Capital of Texas" and a Texas Main Street City, Caldwell brings in thousands of people each year for the Kolache Festival in September and its year-round culture.

Contents

1. Executive Summary	1
2. Overview	7
3. History	8
1. Population	10
4.1 Population Density	10
4.2 Historical Population Growth	11
4.3 Population Projections	13
4.3.1 Projections for Total Population	13
4.3.2 Projections for Population by Age and Gender	15
4.3.3 Projections for Population by Race/Ethnicity	17
4.4 Population Economics and Poverty	20
4.4.1 Spatial Distribution of Income Levels	20
4.4.2 Gender Wage Gap	21
4.4.3 Unemployment Rate	21
4.4.4 Poverty Rate	23
4.4.5 Other Social Vulnerability Indicators	24
4.5 Education and Civic Capacity	24
4.5.1 Population with Less Than a High School Education	25
4.5.2 Population Who Speak English Not Well or Not at All	25
5. Housing	26
5.1 Housing Stock	26
5.2 Housing Type	29
5.3 Households	30
5.4 Housing Occupancy and Tenure	31
5.5 Housing Prices	34
5.6 Housing Affordability	35
5. Economy	39
6.1 Jobs and Incomes	39
6.2 Industry Specialization by Employment Share	41
6.3 Location Quotient Analysis	42
6.4 Economic Base Multiplier Analysis	43
6.5 Economic Growth	43

	6.6 Job Density and Flows	44
	6.6.1 Employment Inflows and Outflows	44
	6.6.2 Jobs by Distance	44
	6.6.3 Employment Density	45
	6.7 Leakage and Surplus	47
	6.8 Economic Development Initiatives	47
7.	. Environment	48
	7.1 Ecoregions	48
	7.2 Land Cover	49
	7.3 Watershed and Aquifers	50
	7.4 Wetlands	51
	7.6 Vegetation	51
	7.7 Threatened and Endangered Species	52
	7.8 Environmental Community Organizations	53
	7.5 Environmentally Significant Areas	53
	7.5.1 Brazos River	54
	7.5.2 Davidson Creek and Elm Branch	54
	7.5.3 Lake Somerville	55
8.	. Hazards Vulnerability	56
	8.1 Historical Disasters and Emergency Events	56
	8.2 Natural Hazards	56
	8.2.1 Flooding	56
	8.2.2 Severe Wind Events	58
	8.2.3 Hurricanes	58
	8.2.4 Tornadoes	58
	8.2.5 Hail	58
	8.2.6 Thunderstorms	59
	8.2.7 Wildfire	59
	8.3 Social Vulnerability	61
9.	. Transportation	62
	9.1 Mode Networks	62
	9.1.1 Highways	63
	Q 1 2 Railroads	65

9.1.3 Airports	65
9.2 Transportation Modes	66
9.2.1 Mode Share	66
9.2.2 Travel Time to Work	68
9.2.3 Vehicle Ownership	68
9.3 Public Transportation	69
9.4 Active Transportation Modes	69
10. Community Facilities	70
10.1 Education	70
10.1.1 Schools	70
10.1.2 Childcare	71
10.2 Healthcare	71
10.3 Public Administration	71
10.3.1 Police	71
10.3.2 Fire	71
10.3.3 Other Government Infrastructure	72
10.4 Utilities	72
10.5 Public Amenities	74
10.5.1 Parks	74
10.5.2 Library	75
10.5.3 Museums	76
10.6 Community initiatives and organizations:	77
10.6.1 Voices for Children - Court Appointed Special Advocate (CASA) of Brazos Valley	77
10.6.2 Hospice Brazos Valley	78
10.6.3 Bluebonnet Area Crime Stoppers	78
10.6.4 Burleson County Wildlife Association	78
10.6.5 Other Initiatives	78

2. Overview

The City of Caldwell is the county seat and largest city in Burleson County, Texas. Burleson County is within the Bryan-College Station Metropolitan Statistical Area (MSA) together with Brazos and Robertson Counties. It is in the south-central part of the "Texas Triangle" cultural and economic mega-region, generally defined as the space between San Antonio, Dallas-Fort Worth and Houston, bounded by interstates 10, 35 and 45. Burleson County is a primarily rural county with an estimated population of 18,443 as of 2019, but it contains three incorporated communities, namely Caldwell, Snook, and Somerville. Caldwell sits at the intersection between Texas State Highways 21 and 36, approximately 30 miles from College Station and 80 miles from Austin.

Burleson County is in the Post Oak Prairie ecoregion that represents the transition zone between the deeply wooded Piney Woods of East Texas and the drier, sparser grassland prairies of Central and North Texas. The entire county also exists within the "Lakes and Prairies" cultural and tourism region, which includes the Bryan-College Station, Waco and Dallas-Fort Worth MSAs. The county lies in the Texas Brazos Trail Region, an 18-county area of Central Texas, as a part of the 10-region Heritage Trails Program of the Texas Historical Commission.

Caldwell is known throughout its local area for its Kolache Festival, celebrating local Czech heritage. Caldwell is a member of the Texas Main Street program, dedicated to preserving the character of traditional main streets, coordinated with the Texas Historical Commission.

3. History

Before the 1830s, the area now known as Burleson County was the indigenous territory of the Tonkawa People, who were nomadic hunter-gatherers who did not practice agriculture. They were regarded as peaceful and friendly by later European settlers during early interactions between the groups. Caddoan and Wichita peoples were also frequently found in the area, with the latter being the most hostile to settler encroachment into their land.1 By the 1830s, Anglo settlement had begun in the area, enabled by the Mexican government's Empresario program. The early colony's legality with the Mexican government was questionable, but Stephen F. Austin and Sterling Robertson both made efforts to bring in settlers to what is now Burleson County. The first settlement of Robertson's Colony in present-day Burleson County was mainly situated between the Yegua Creek and Old San Antonio Road (OSR). The largest group of settlers came from the Upper South and generally reproduced the class relations of that region, including slavery.² The frontier moved past Burleson in the 1840s, reducing the frequency of confrontations between Indigenous and settler cultures. Caldwell was designated the seat of Milam County for one year before being transferred to Burleson County in 1846. Plantation agriculture with enslaved labor was firmly established by the late 1840s, especially in the eastern part of the county, but a small Freedmen's community had existed since the 1830s.³ Current freedom colonies documented in the county by the Freedom Colonies Project include Yellow Prairie, at the current site of Chriesman, Teal's Prairie on FM1326 near the Milam County line and the Brazos River, Fort Oldham on FM1326 south of SR 21, Tunis, along FM166 East of Caldwell, and Dabney Hill in Snook, associated with the prominent pastor and Civil Rights advocate Lucas Albert Anderson.4

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¹ Jackson, C.C. (2020). Burleson County. *Texas State Historical Association*. Retrieved from https://tshaonline.org/handbook/online/articles/hcb18.

² Jackson (2020).

³ Jackson (2020).

⁴ Texas Freedom Colonies Project. (n.d.). Retrieved from https://tamu.maps.arcgis.com/apps/MapSeries/index.html?appid=48f89eof87oc4400a990682a09cf919f.

In 1860, cotton and cattle ranching reached levels of output and profit not seen again for 100 years. Public opinion in the county was polarized on the issue of secession, although the county furnished a significant number of soldiers to the Confederate Army. After the war, a nearly all-black regiment of Texas State Police was stationed in Caldwell through the 1860s to aid in reconstruction. The county was the site of several periods of organized white supremacist violence, particularly at times when the black population or foreign immigrant population rose significantly. 5 By the 1850 census, Burleson County was 29.2% Black, a share that continued to rise until peaking at 46% in the 1910 census. Like much of the South, Burleson County's Black population after Reconstruction was largely trapped in the condition of punitive, constant debt obligations for tenant farmers known as "sharecropping". While nominally free from chattel slavery, conditions for those recently emancipated continued to resemble involuntary labor long after the Civil War. The proportion of foreign-born Whites in the county (primarily Czech or from Central and Southern Europe) grew significantly after 1880, with almost a quarter of the county's population being either foreign born themselves or having at least one foreign-born parent. Another wave of immigration, this time predominantly Mexican in origin, arrived in the interwar period and briefly afterwards. By the 1970 census, the immigrant population had dropped sharply to less than three percent, a proportion it would maintain until 2000. The immigrant population of Burleson County once again crested 7% by 2010 and has remained near that figure through 2018, signaling a potential return to the county's rich history of large-scale immigration.

Caldwell was a major regional hub of transportation and business by the 1850s, with many downtown stores and a hotel of regional importance. Additional railroad investment in the 1880s further elevated its importance as a regional trade hub. Bryan developed a competing rail industry in the 1870s, initially increasing profits and yields for Burleson County's agricultural sector, but later cutting into the Caldwell railroad's market share. Caldwell incorporated as a mayor-council city form of government in 1891.

⁵ Jackson (2020).

The Great Depression largely ended the tenant farming structure that dominated postwar Burleson County, and when agriculture finally returned to its pre-Depression profits and yields in the mid-'50s, far fewer laborers were employed in a now-mechanized industry.⁶

⁶ Freese (2002).

4. Population

Burleson County's population was estimated at 18,443 as of July 2019. With 4,373 residents, Caldwell makes up a little less than 25% of the county's population. The other two incorporated cities in the county are Somerville, with 1,465 residents, and Snook, with 541.7 4.1 Population Density

Burleson County's population density of 27.1 persons per square mile is approximately 75% lower than the Texas average (106 persons/mi²). Outside of Caldwell, which has a population density of 1,103.7/mi², the highest densities are found around Somerville in the southern part of the county. Population density is generally higher in the western part of the county, while the wooded northern part and the open Brazos floodplain on the eastern edge are minimally populated. Apart from the three incorporated cities, Burleson County contains a number of unincorporated hamlets and villages. Along State Highway 36 are two small settlements, Chriesman (northwest of Caldwell) and Lyons (just northwest of Somerville). Along State Highway 21 and the Union Pacific corridor lie Cooks Point (northeast of Caldwell) and Deanville, Hogg, and San Antonio Prairie (southwest of Caldwell). Around Snook lie Foster Store, Grant, Tunis, Wilcox, and Center Line, while Birch and Frenstat are situated northwest of Somerville. Finally, Clay stands along the BNSF line east to Navasota.

⁷ U.S. Census Bureau. (2020). City and Town Population Totals: 2010-2019. Retrieved from https://www.census.gov/data/tables/time-series/demo/popest/2010s-total-cities-and-towns.html.

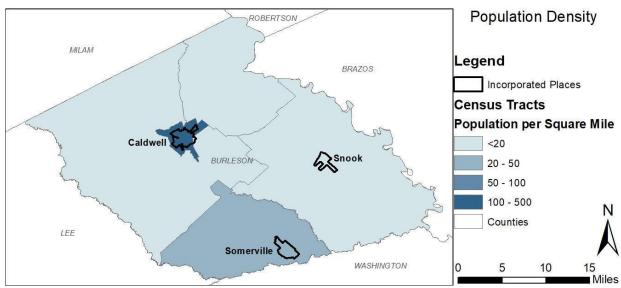


Figure 4.1: Population Density. Source: U.S. Census Bureau (2020)

Table 4.1: Population and Density

POPULATION	Toyas	Burleson	City of	City of	City of
& DENSITY	Texas	County	Caldwell	Somerville	Snook
Population	28,995,881	18,443	4,373	1,465	541
Pop. Density	106/mi ²	27 . 1/mi²	1,103.7/mi²	491.6/mi ²	269 . 2/mi²

Source: U.S. Census Bureau (2020)

4.2 Historical Population Growth

Burleson County's population peaked at approximately 20,000 in the 1930 Census. The county's population grew throughout the latter half of the 19th century, although with relatively slow growth during the 1870s, a period marked by recession. Beginning in the early 20th century, the "push" of Jim Crow laws and the "pull" of factory jobs in the North caused a precipitous decline in the African American population, while European immigration tailed off. The county's overall population declined as a result of the Great Depression and industrialization. By 1970, the population was just over half of what it had been in 1930. Amid growth in the oil industry and the construction of Somerville Lake, the population began to recover during the 1970s and grew stronger until 2000. In the 21st century, population growth has been slower, but continues to increase.⁸

⁸ Jackson, C.C. (2020). Burleson County. *Texas State Historical Association*. Retrieved from https://tshaonline.org/handbook/online/articles/hcb18.

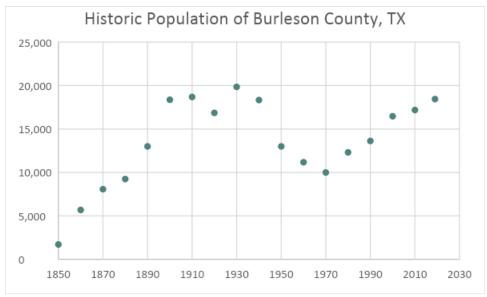


Figure 4.2: Historical Population of Burleson County. Source: U.S. Census Bureau, 1850-2010 Decennial Censuses, 2019 Population Estimate

Despite Burleson County's significant population decline in the mid-20th century, Caldwell has grown steadily, with the exception of a minor decrease in the 1940s. Throughout the 1950s and 1960s, Caldwell's population grew very slowly, at a rate of about 10 people per year. Since 1970, the city's growth rate has been much higher, with periods of high oil prices in the 1970s and 2000s correlated with faster growth.

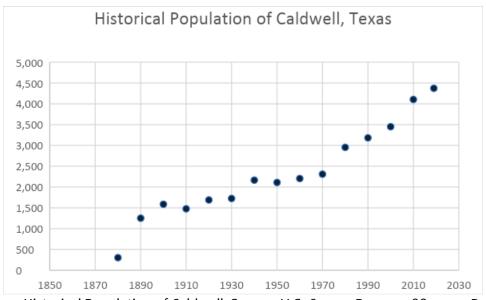


Figure 4.3: Historical Population of Caldwell. Source: U.S. Census Bureau, 1880-2010 Decennial Censuses, 2019 Population Estimate

Although Caldwell has been the largest city in the county throughout most of its history, the growth of railroad workshops and a railroad tie plant (at one point, the largest in the United States) allowed Somerville to claim this title between the World Wars. Somerville's population has generally declined since 1930, from a peak of 2,287, to 1,376 in 2010, despite a brief flurry of growth in the 1970's. With an estimated population of 541 in 2019, Snook has grown more slowly than Caldwell or Somerville since its founding by Czech settlers in the late 19th century. Located between the earlier settlement of Sebesta and the Dabney Hill freedom colony, Snook grew considerably in the mid-20th century (from 140 in 1950 to 384 in 1970) and was incorporated in 1972. However, the population declined by almost 20% between 2000 and 2010. 12

Table 4.2: Population Growth, 2000-2010

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POPULATION	2000	2010	Absolute	Percent
GROWTH	2000	2010	Change	Change
Texas	20,851,820	25,145,561	4,293,741	20.59%
Burleson County	16,470	17,187	717	4.35%
Caldwell city	3,449	4,104	655	18.99%
Somerville city	1,704	1,376	-328	-19.25%
Snook city	568	511	-57	-10.04%

Source: Decennial Census Table DP-1 (U.S. Census Bureau, 2000 and 2010)

Table 4.3: Population Growth, 2010-2019

POPULATION	2010	2010 (oct)	Absolute	Percent				
GROWTH	2010 2019 (est.)		Change	Change				
Texas	25,145,561	28,995,881	3,850,320	15.31%				
Burleson County	17,187	18,443	1,256	7.31%				
Caldwell city	4,104	4,373	269	6.55%				
Somerville city	1376	1,465	89	6.47%				
Snook city	511	541	30	5.87%				

Source: Decennial Census Table DP-1, ACS Table Bo1003 (US Census Bureau, 2010, 2020)

4.3 Population Projections

⁹ Population.us (2016). Population of Somerville, TX. Retrieved from https://population.us/tx/somerville/.

¹⁰ U.S. Census Bureau. (2020). City and Town Population Totals: 2010-2019.

¹¹ Odintz, M. (2010). Snook, TX. *Texas State Historical Association*. Retrieved from https://tshaonline.org/handbook/online/articles/hls61.

¹² U.S. Census Bureau. (2000 and 2010). Decennial Census Table DP-1. Retrieved from https://www.census.gov/programs-surveys/decennial-census.html.

4.3.1 Projections for Total Population

Population estimates for Texas counties are available from two state agencies, the Texas Demographic Center (TDC) and the Texas Water Development Board (TWDB). The TDC uses a Cohort-Component model to project population estimates based on recent trends. The TWDB provides county population projections based on modified TDC figures and city or water service area (WSA) projections based on client data reported by local water utilities; the TWDB assumes that population will not decline and extrapolates from current trends using a linear model. For this report, both sets of numbers were used for Burleson County, while figures for Caldwell, Somerville, and Snook used TWDB figures.

Although the population of Texas is expected to increase significantly according to both sets of projections, TDC projects substantially higher growth than TWDB. As state population growth is driven primarily by large metropolitan areas, statewide trends are not reflected in projections for Burleson County. While the TDC forecasts 6.3% county population growth between 2010 and 2050 (an absolute increase of 1091), the TWDB projects a 26.5% increase (an increase of 4,548 persons). The TWDB likewise projects 29.4% growth in Caldwell, 47.7% in Somerville, and 98.2% in Snook. These projections should not be considered definitive, since population growth for cities will depend on additional factors such as annexation and may be highly dependent on the fortunes of a single large employer.

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¹³ Texas Demographic Center (2018b). Projections of the Population of Texas and Counties in Texas by Age, Sex, and Race/Ethnicity for 2010-2050. Retrieved from

https://demographics.texas.gov/Data/TPEPP/Projections/Methodology.pdf.

¹⁴ Texas Water Development Board. (2019a). 2021 Regional Water Plan: County Population Projections for 2020-2070. Retrieved from https://www3.twdb.texas.gov/apps/reports/Projections/2022%20Reports/pop_county.

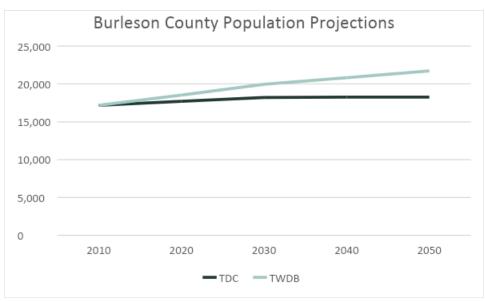


Figure 4.4: Burleson County Population Projections, 2010-2050. Source: TDC (2018), TWDB (2019)

Table 4.4: Population Projections by City, 2010-2050

rable 4:4. I opulation i rojections by city, 2010 2030								
CITY GROWTH	2010	2020	2030	2040	2050	Absolute Change	Percent Change	
Caldwell	4,104	4,896	5,060	5,276	5,312	1,208	29.4%	
Somerville	1376	1,530	1,686	1,848	2,033	657	47.7%	
Snook	511	865	930	970	1,013	502	98.2%	

Source: TWDB (2019)

Apart from births and deaths, the population is also affected by migration patterns. Inbound migration from other counties will cause Burleson County's population to increase, while outbound migration to other regions will cause the county's population to decrease. In 2010, the last year for which data was available, there was slightly more inbound than outbound migration, primarily from Brazos County (Bryan/College Station), Harris County (the Houston area), and Bell County (the Temple-Killeen area). Primary destinations of outbound migration were Travis County (the Austin area) and Washington County (including Brenham). In all cases the net increase or decrease was relatively small, and counties which appeared as migration destinations in one year appeared as sources in other years. This may correspond to young people leaving the county for college and then returning to work.

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¹⁵ Bruner, J. (2012). American Migration [Interactive Map]. Forbes. Retrieved from https://www.forbes.com/special-report/2011/migration.html.

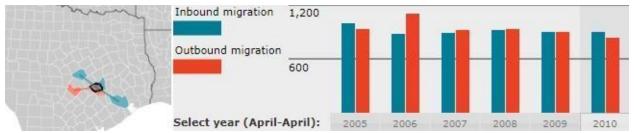


Figure 4.5: Inbound and Outbound Migration. Source: Bruner (2012)

4.3.2 Projections for Population by Age and Gender

Caldwell and Burleson County are older than the Texas average, although it should be noted that Texas is a very young state by national standards. Burleson County's population pyramid shows a relatively high proportion of children and large cohorts of residents approaching retirement age. In line with national trends, the Baby Boomer generation (approximately corresponding to ages 55-72) is larger than the subsequent Generation X. The population under age 20, corresponding to Generation Z, is relatively large compared to the 20-35 Millennial generation, which may reflect recent population growth.

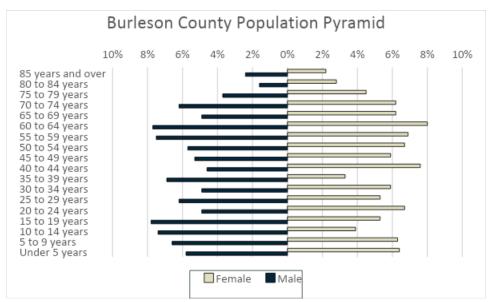


Figure 4.6: Population Pyramid for Burleson County, 2018. Source: U.S. Census Bureau (2019)

Caldwell's population pyramid shows a significant imbalance between the numbers of young men and women. The male 15 to 19 population is the single largest cohort, making up roughly one seventh of the city's population. Above age 40, there are more women than men in all but one age bracket. While this may be expected in the oldest cohorts due to

longer life expectancy among women, the reasons for the relative scarcity of men in prime earning-potential age brackets are unclear.

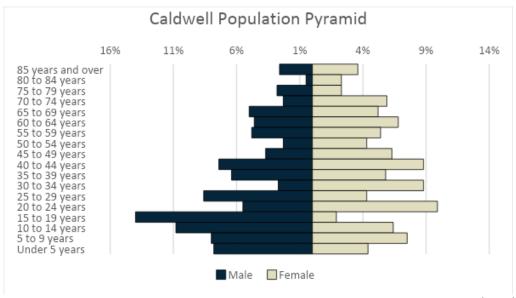
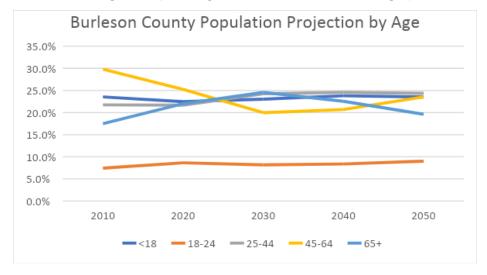


Figure 4.7: Population Pyramid for Caldwell, 2018. Source: U.S. Census Bureau (2019)

TDC forecasts show a reversal of current trends towards an aging population, although with a continued decrease in the 45- to 64-year-old, late-career working age population. The Burleson County population is expected to become younger long-term, with steady growth in under-18 and 18- to 24-year-old populations after 2030, and a marked decrease in the over-65 population. Given the large population of boys and young men, the county is expected to become majority-male long term (although by a relatively small margin).¹⁶



¹⁶ Texas Demographic Center (2018b).

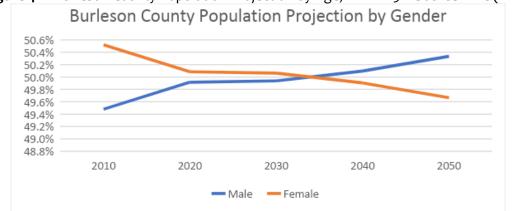


Figure 4.8: Burleson County Population Projection by Age, 2010-2050. Source: TDC (2019)

Figure 4.9: Burleson County Population Projection by Gender, 2010-2050. Source: TDC (2019)

Burleson County has a gender distribution of 53.1% to 46.9% in favor of men, characteristic of areas dominated by the oil industry or other natural resource extraction. This sector generates high-paying jobs, but often with little permanence or stability, and can have complicating effects on other economic sectors with less ability to match prevailing wages.

4.3.3 Projections for Population by Race/Ethnicity

Burleson County has much larger non-Hispanic White and smaller Hispanic populations than Texas overall. The Asian population is dramatically smaller than the state average, while the Black and other non-Hispanic populations make up similar proportions at the state and county levels. Figure 4.10 compares the racial and ethnic makeup of Burleson County to Texas as a whole.

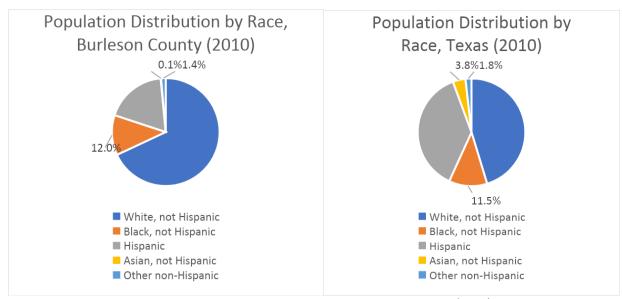


Figure 4.10: Population Distribution by Race, Burleson County and Texas (2010). Source: U.S. Census Bureau (2010)

Tables 4.5 to 4.7 summarize the 2010 racial/ethnic demographic changes in Burleson County. Tables 4.8 to 4.10 address changes in Caldwell. Due to concerns about data validity at smaller sample sizes, racial and ethnic shifts in Somerville and Snook were not analyzed.

Tables 4.5-4.7: Burleson County Racial and Ethnic Demographic Change, 2010-2018

BURLESON COUNTY POPULATION BY	Not Hispanic		Hispanic or			
RACE/ETHNICITY (2010)	or Latino:	2010	Latino:	2010	Total	2010
White alone	11,689	68.53%	1,874	10.99%	13,563	79.51%
Black or African American alone	2,079	12.19%	1	0.00%	2,079	12.19%
American Indian & Alaska Native alone	-	0.00%	10	0.06%	10	0.06%
Asian alone	91	0.53%	-	0.00%	91	0.53%
Native Hawaiian & Other Pacific Islander alone	11	0.06%	1	0.00%	11	0.06%
Some other race alone	-	0.00%	1,037	6.08%	1,037	6.08%
Two or more races	211	1.24%	56	0.33%	267	1.57%
All races	14,081	82.55%	2,977	17.45%	17,058	100.00%

	Not					
BURLESON COUNTY POPULATION BY	Hispanic or		Hispanic or			
RACE/ETHNICITY (2018)	Latino:	2018	Latino:	2018	Total	2018
White alone	11,617	68.01%	2,681	15.70%	14,299	83.71%
Black or African American alone	2,240	13.11%	19	0.11%	2,259	13.23%
American Indian & Alaska Native alone	52	0.30%	7	0.04%	59	0.35%
Asian alone	40	0.23%	0	0.00%	40	0.23%
Native Hawaiian & Other Pacific Islander alone	0	0.00%	0	0.00%	-	0.00%
Some other race alone	8	0.05%	8	0.05%	16	0.09%
Two or more races	249	1.46%	160	0.94%	409	2.39%
All races	14,206	83.17%	2,875	16.83%	17,081	100.00%

CHANGE IN POPULATION BY	Not Hispanic or					
RACE/ETHNICITY (2010-2018)	Latino:		Hispanic or Latino:		Total	
BURLESON COUNTY	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
White alone	-72	-0.6%	807	43.1%	736	5.4%

Black or African American						
alone	161	7.7%	19	1900%	180	8.7%
American Indian & Alaska						
Native alone	52	0	-3	-30.0%	49	490.0%
Asian alone	-51	-56.0%	0	0	-51	-56.0%
Native Hawaiian & Other						
Pacific Islander alone	-11	-100.0%	0	0	-11	-100.0%
Some other race alone	8	0	-1,029	-99.2%	-1,021	-98.5%
Two or more races	38	18.0%	104	185.7%	142	53.2%
All races	125	0.9%	-102	-3.4%	23	0.1%

Note: 2010 data is from the decennial census, meaning that it uses actual counts rather than estimates from a sample. Additionally, several demographic factors that converge in Burleson County, including poverty rates, high % nonwhite, etc., reduce census response rate.¹⁷

Between 2010 and 2018, the White Hispanic and Black or African American populations appear to have grown more than other races. There seems to be a significant increase in the American Indian population, although this could be a result of cultural changes that encourage asserting Native identity rather than evidence of actual migration.

Tables 4.8–4.10: Caldwell Racial and Ethnic Demographic Change, 2010-2018

			0 1		,	
CALDWELL POPULATION BY RACE/ETHNICITY	Not Hispanic		Hispanic or			
(2010)	or Latino:	2010	Latino:	2010	Total	2010
White alone	2,427	59.91%	873	21.55%	3,300	81.46%
Black or African American alone	347	8.57%	1	0.00%	347	8.57%
American Indian & Alaska Native alone	-	0.00%	ı	0.00%	-	0.00%
Asian alone	72	1.78%	ı	0.00%	72	1.78%
Native Hawaiian & Other Pacific Islander alone	-	0.00%	ı	0.00%	-	0.00%
Some other race alone	-	0.00%	263	6.49%	263	6.49%
Two or more races	13	0.32%	56	1.38%	69	1.70%
All races	2,859	70.58%	1,192	29.42%	4,051	100.00%

CALDWELL POPULATION BY RACE/ETHNICITY	Not Hispanic		Hispanic or			
(2018)	or Latino:	2018	Latino:	2018	Total	2018
White alone	2,631	57.36%	684	14.91%	3,316	72.28%
Black or African American alone	864	18.84%	10	0.22%	874	19.06%
American Indian & Alaska Native alone	11	0.24%	7	0.15%	18	0.39%
Asian alone	0	0.00%	0	0.00%	-	0.00%
Native Hawaiian & Other Pacific Islander alone	0	0.00%	0	0.00%	-	0.00%
Some other race alone	8	0.17%	226	4.93%	234	5.10%
Two or more races	42	0.92%	104	2.27%	146	3.18%
All races	3,556	77.52%	1,031	22.48%	4,587	100.00%

CHANGE IN POPULATION BY	Not Hispanic or					
RACE/ETHNICITY (2010-2018)	Latino:		Hispanic or Latino:		Total	
CALDWELL	Absolute Change	% Change	Absolute Change	% Change	Absolute Change	% Change
White alone	204	8.4%	-189	-21.6%	16	0.5%

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¹⁷ McGeeney, K., Kriz, B., Mullenax, S., Kail, L., Walejko, G., Vines, M., Bates, N., and García Trejo, Y. (2020). 2020 Census Barriers, Attitudes, and Motivators Study Survey Report. *U.S. Census Bureau*. Retrieved from https://www2.census.gov/programs-surveys/decennial/2020/program-management/final-analysis-reports/2020-report-cbams-study-survey.pdf.

Black/African American alone	517	149.0%	10	0	527	151.9%
American Indian & Alaska						
Native alone	11	5.0%	7	0	18	0
Asian alone	-72	-100.0%	0	0.0%	-72	-100.0%
Native Hawaiian & Other						
Pacific Islander alone	0	0.0%	0	0.0%	-72	-27.4%
Some other race alone	8	0	-37	-14.1%	234	-27.4%
Two or more races	29	223.1%	48	85.7%	146	211.6%
All races	697	24.4%	-161	-13.5%	4,324	106.7%

Note: 2018 Data is reported from the American Community Survey and is a sample of the larger population. These numbers are subject to error and should be understood as existing within a range of possible "true" values. Data on race and ethnicity in both the Census and American Community Survey are self-reported data, and is subject to changes in social attitudes. The large change in self-reported ethnicity and race among Latinos is primarily attributable to a change in cultural attitudes toward self-defined groups, rather than large-scale demographic shift.¹⁸

Trends for Caldwell show significant increases in the non-Hispanic White and Black or African American populations, as well as a large increase in the population reporting two or more races. Along with the decrease in White Hispanic and "some other race" populations, apparent shifts may be due to changes in self-reporting rather than actual migration. Younger generations at the bottom of the county's population pyramid have smaller proportions of non-Hispanic Whites, suggesting that the county will become more diverse over time (in line with state- and nationwide trends.) Towards 2050, Hispanic residents will make up a steadily increasing proportion of the population, while non-Hispanic Whites will remain the largest group. Figure 4.11 displays population projections by race and ethnicity.

¹⁸ Liebler, C., Rastogi, S., Fernandez, L.E., Noon, J.M., and Ennis, S.R. (2014). America's Churning Races: Race and Ethnic Response Changes between Census 2000 and the 2010 Census. *U.S. Census Bureau*. Retrieved from https://www.census.gov/content/dam/Census/library/working-papers/2014/adrm/carra-wp-2014-09.pdf.

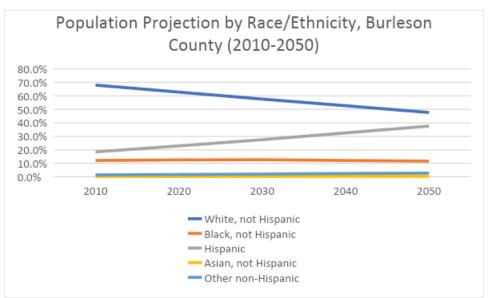


Figure 4.11: Population Projection by Race and Ethnicity, Burleson County, 2010 to 2050. Source: TDC (2019)

Although TDC projections were not available at the city level, it appears that the rural population may remain overwhelmingly non-Hispanic White population, while other racial/ethnic groups increasingly cluster in Caldwell and Somerville.¹⁹

4.4 Population Economics and Poverty

Among the county's agricultural sector, its largest by proportion, the average farmer is white, male, and above the age of 35. These demographics are likely to change in the future as the county becomes younger and more diverse, but virtually all farms in the county (98%) are family owned, with only 22% currently employing farm labor, which could be a barrier to economic opportunity for those who are not from farming families in the future. As in many Texas counties, local farms sell a negligible amount of produce directly to consumers.

4.4.1 Spatial Distribution of Income Levels

As may reasonably be expected for most regions of analysis beyond the very small-scale, economic conditions vary across Burleson County. The spatial distribution of differences in income and wealth can be identified using indicators such as average income,

¹⁹ U.S. Census Bureau. (2000 and 2010). Decennial Census Table DP-1.

unemployment rates, poverty rates, home values and tenure, referring to whether a property is owner-occupied or leased. The largest concentration of low-income households appears to be in Caldwell, where in 2018 10.3% of households reported less than \$10,000 income in the last 12 months, compared to 6.5% of county households.²⁰

4.4.2 Gender Wage Gap

Across the United States, full-time female workers earn only about 78% as much as full-time male workers, on average. When adjusting for field of study, position, age, and hours of work, a comparable woman still earns 7% less than a man, on average. Trends in Burleson County are no exception, with the median income for employed women only a little over half of the male median income. This difference falls to a still considerable 21.9% for full-time workers. Burleson County still appears to have a wider gender pay gap than Texas as a whole, as shown in Table 4.11.

Table 4.11: Gender Pay Gap, 2018

• , , , ,				
	Texas		Burleson County	
GENDER WAGE GAP	Male Female		Male	Female
Median earnings, all paid workers	\$38,881	\$26,787	\$41,776	\$22,203
Wage Gap	31.1%		46.9%	
Median earnings, full-time, year-round workers	\$50,031	\$39,895	\$49,075	\$38,347
Wage Gap	20.3%		21.9%	

Source: ACS Table S2001 (U.S. Census Bureau, 2018)

4.4.3 Unemployment Rate

Unemployment data is usually expressed as the percentage of the workforce (those who are working or have actively looked for work in the last month) currently jobless. Data was analyzed for 2013, at a time when the United States had recently come out of the 2007-2009 recession, and in 2018, after several years of economic growth.

The unemployment rate in Burleson County was slightly higher than the Texas average

²⁰ U.S. Census Bureau (2018). American Community Survey 2018 5-Year Estimates: Table S1901. Retrieved from https://data.census.gov/cedsci/table?q=Income%20and%20Earnings&g=0500000US48051_1600000US4811836,4868720&tid=ACSST5Y2018.S1901&hidePreview=true.

²¹ O'Brien, S.A. (2015, April 14). 78 cents on the dollar: The facts about the gender wage gap. CNN. Retrieved from https://money.cnn.com/2015/04/13/news/economy/equal-pay-day-2015/.

 $^{^{22}}$ U.S. Census Bureau. (2018). American Community Survey 2018 5-Year Estimates: Table S2001. Retrieved from https://data.census.gov/cedsci/table?q=Earnings%20%28Individuals%29&g=0400000US48_0500000US48051_1600000US4811836,4868576,4868720&tid=ACSST5Y2018.S2001&hidePreview=true.

throughout the period 2013 to 2018. It was slightly lower than the state average in Caldwell, although it rose from 4.3% to 5.0% over this time period, while the unemployment rate dropped by over 2% across both Burleson County and Texas as a whole.²³

Table 4.12: Comparison of Unemployment Rates, 2013 and 2018

		, ,	
UNEMPLOYMENT RATE	Texas	Burleson County	Caldwell
2013	8.1%	8.4%	4.3%
2018	5.4%	6.1%	5.0%

Source: ACS Table DPo3 (U.S. Census Bureau, 2013 and 2018)

While the unemployment rate for individuals age 20 and up in Burleson County is comparable to statewide figures, the county's youth unemployment rate (age 16 to 19) was considerably higher, at 17.4%. ²⁴

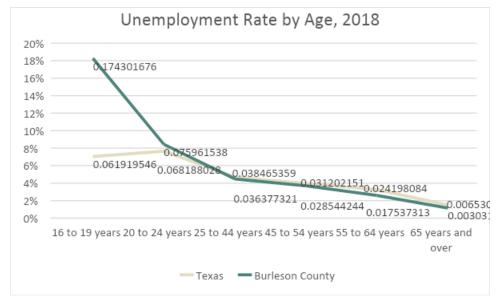


Figure 4.12: Unemployment Rate by Age in Burleson County and Texas, 2018. Source: ACS Table B23001 (U.S. Census Bureau, 2018)

A related measure of economic health is labor force participation, which measures the proportion of residents of working age (16 years and over) who are working or looking for a job – the employee pool from which the unemployment rate is derived. The labor force

²⁴ U.S. Census Bureau. (2018). American Community Survey 2018 5-Year Estimates: Table B23001. Retrieved from https://data.census.gov/cedsci/table?q=ACSDT1Y2018.B23001&g=0400000US48_0500000US48051_1600000US4811836&tid=ACSDT5Y2018.B23001&hidePreview=true.

excludes discouraged workers no longer looking for a job. It is somewhat smaller, proportionally, in Burleson County, potentially indicating more discouraged workers.

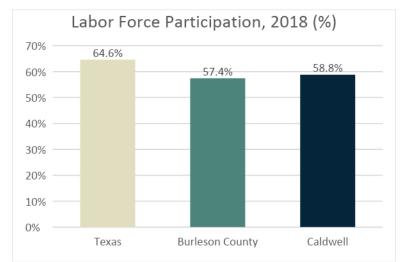


Figure 4.13: Labor Force Participation in Texas, Burleson County, and Caldwell, 2018. Source: ACS Table DP03 (U.S. Census Bureau, 2018)

4.4.4 Poverty Rate

The poverty rate is calculated based on self-reported income from various sources and determined based on living costs per person in a family or household, without regard to local cost of living.²⁵ If total household income is below 100% of the poverty line, all members of the household are counted as living in poverty. In Texas, an estimated 15.5% of the population lived below the poverty line as of 2018, compared to 12.6% of residents of Burleson County and 16.6% of Caldwell residents. Overall, Burleson County seems to have less poverty than the state as a whole, with 79.2% of the county population having income exceeding 150% of the poverty level.²⁶

Table 4.12: Comparison of Poverty Status in Texas, Burleson County, and Caldwell, 2018

POVERTY RATES (2018)	Texas	Burleson County	Caldwell
< 100% of poverty level	15.5%	12.6%	16.6%
100% - 149% of poverty level	10.1%	8.2%	8.0%

Source: ACS Table So601 (U.S. Census Bureau, 2018)

²⁵ U.S. Census Bureau. (2019). How the Census Bureau Measures Poverty. Retrieved from https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html#:~:text=If%20a%20family's%20total%20income,Index%20(CPI%2DU).

 $^{^{26}}$ U.S. Census Bureau. (2018). American Community Survey 2018 5-Year Estimates: Table S0601. Retrieved from https://data.census.gov/cedsci/table?q=ACSST1Y2018.S0601&g=0400000US48_0500000US48051_1600000US4811836&tid=ACSST5Y2018.S0601&hidePreview=true.

Between 2014 and 2017, the poverty rate in Burleson County and Caldwell appears to have risen and then fallen. The poverty rate in Caldwell exceeded the Texas average in 2014 before converging with the state average in 2018. It is not clear what would cause this rising-and-falling trend, although the drop in oil prices after 2014 may have hurt the local economy.

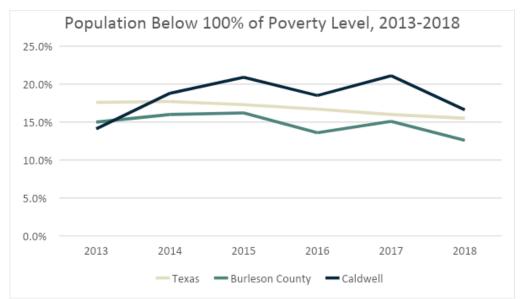


Figure 4.14: Poverty Rate in Texas, Burleson County, and Caldwell, 2013-2018. Source: ACS Table S0601 (U.S. Census Bureau, 2018)

4.4.5 Other Social Vulnerability Indicators

The USDA food desert map does not identify any tracts of Burleson County as Food Deserts by their methodology. Food stores in the city include one Brookshire Brothers, one Walmart, two dollar stores, and several convenience stores. Most Caldwell residents are within a half-hour walk of the Walmart and Brookshire Brothers if they do not own a car, but there are several areas of town, notably near the CHI St. Joseph's Hospital, that are about 45 minutes' walk from these locations and may constitute a barrier to access. Those with access to bicycles can reach these supermarkets within ten minutes ride from anywhere in town, but the city's Bike Score is 35/100 - "minimal bike infrastructure", which could represent a real or perceived lack of safety that may deter ridership and minimal walking and biking paths. Caldwell and rural southeast Burleson County exhibit warning signs of potential issues of access to food in the future, with concentrations of low income residents and households with limited access to vehicles.

4.5 Education and Civic Capacity

Burleson County has 17.5% of adults over 25 with no high school degree, 65.4% with a high school degree, 17.1% with a bachelor's degree, meaning that it is more likely to meet a high school dropout in Burleson County than a college graduate, which could significantly limit the social capital available to local young adults. However, with a significant portion of the county's rural population working in agriculture, typically on family farms, the low educational attainment rates may not be as limiting of social mobility as they would be in the more urbanized central tract of Caldwell. In Caldwell, the numbers are 19% with no high school degree, 81% with a high school degree, 16.4% with a bachelor's degree, which could signal more significant social immobility, given the urban setting. The local high school dropout rate in both geographic levels is higher than the state average of 16.9%. All degree levels of educational attainment are lower in both Burleson County and Caldwell than in the state of Texas, which could constitute a major barrier to accessing any existing or future quality employment in the region.

Compared to the county average, it appears that Somerville has lower educational attainment and Snook has higher attainment.²⁷ This may be related to the presence of the tie/ creosote plant in Somerville, which provides industrial jobs that do not require post-secondary education, and Snook's proximity to College Station and Texas A&M University.

²⁷ U.S. Census Bureau Center for Economic Studies. (2017). OnTheMap. Retrieved from https://onthemap.ces.census.gov/.

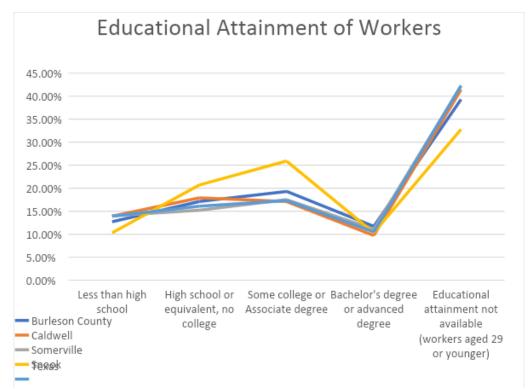


Figure 4.15: Educational Attainment. Source: OnTheMap (U.S. Census Bureau Center for Economic Studies, 2017)

4.5.1 Population with Less Than a High School Education

Among Burleson County workers for which it was possible to determine educational attainment, 12.7%, or approximately 1 in 8, had not finished high school or its equivalent. This figure rose to 13.9% in Caldwell and 14% in Somerville, comparable to the Texas average of 13.9%. The figure was somewhat lower in Snook, at 10.3%.²⁸

4.5.2 Population Who Speak English Not Well or Not at All

A relatively small proportion of Burleson County households had limited English proficiency (an estimated 1.4%, compared to 7.9% of Texas households). Caldwell had a somewhat higher proportion of households with limited English (an estimated 2.8%), while Somerville had the highest percentage at 8.1% of households. Data from Snook was not used due to low sample size and, consequently, high margins of error. Spanish appears to be the predominant language of households with limited English proficiency.²⁹

²⁸ U.S. Census Bureau CES. (2017). OnTheMap.

5. Housing

5.1 Housing Stock

Several characteristics of housing stock are possible to analyze, including the number and distribution of housing units and their age, type, value, occupancy, and tenure (owner-occupied or rented). Certain household data, including size and structure (including family, non-family, and single-person households), is also available from public sources.

Burleson County is a relatively small county, comprising less than 0.1% of Texas's housing stock. Caldwell, in turn, includes 18% of Burleson County's housing units. Approximately 9% of dwellings in the county are located within Somerville, the next-largest population center. The county has a notably high housing vacancy rate, in part due to a large number of occasional residences such as family ranches, hobby farms and hunting lodges (see Table 5.2).

Households in Caldwell and Burleson County are on average smaller than those of Texas as a whole, with a mean household size of 2.85 persons in Caldwell, and 2.64 persons in Burleson County, versus a state average of 2.92 persons.³⁰ 23.9% of households in Caldwell, and 19.7% of households in Burleson County, are comprised of four or more people, compared to 27% of Texas households.³¹ Further discussion of household composition can be found in section 5.3.

Table 5.1: Population and Housing Stock

HOUSING STOCK	Texas	Burleson County	Caldwell
Population	27,885,195	17,863	4,302
Total housing units	10,769,900	9,109	1,685
Occupied housing units	9,553,046	6,754	1,509
Mean number of persons per occupied housing unit	2.92	2.64	2.85
Occupancy rate	88.7%	74.1%	89.6%

Source: U.S. Census Bureau, 2018: Table So601.

³⁰ U.S. Census Bureau. (2018). American Community Survey 2018 5-Year Estimates: Table DP04. https://data.census.gov/cedsci/table?q=DP04%3A%20SELECTED%20HOUSING%20CHARACTERISTICS&g=0400000U 548 0500000US48051 1600000US4811836&tid=ACSST5Y2018.DP04&hidePreview=true&vintage=2018.

³¹ U.S. Census Bureau. (2018). American Community Survey 2018 5-Year Estimates: Table S2501. Retrieved from https://data.census.gov/cedsci/table?q=S2501%3A%20OCCUPANCY%20CHARACTERISTICS&g=0400000US48_050_0000US48051_1600000US4811836&tid=ACSST5Y2018.S2501&hidePreview=true&vintage=2018.

Caldwell's housing stock has grown gradually in recent decades, with a high of 35 building permits issued for single-family homes in 2012 and a low of one permit in 2015. For most of the last 25 years, Caldwell has maintained a lower rate of building permit issuance than the Texas average, with the exception of brief spikes in 2001 and from 2009 to 2012.³² Building permits are not issued by Burleson County, although the county does issue permits for septic tank construction, and for development within 100-year and 500-year floodplains as defined by FEMA.³³ The total number of building permits issued in Burleson County includes those granted by Snook and Somerville, which have ranged from 0 to 11 per year.³⁴

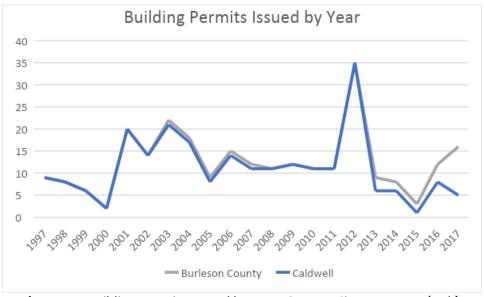


Figure 5.1: Building Permits Issued by Year. Source: City-Data.com (n.d.).

³² City-Data.com. (n.d.). Caldwell, Texas. Retrieved from http://www.city-data.com/city/Caldwell-Texas.html.

³³ Burleson County. (2020). Permits needed for Construction in the Unincorporated County Permits. Retrieved from https://co.burleson.tx.us/living/permits-needed-for-construction-in-the-unincorporated/.

³⁴ City-Data.com. (n.d.). Burleson County, Texas. Retrieved from http://www.city-data.com/county/Burleson_County-TX.html.

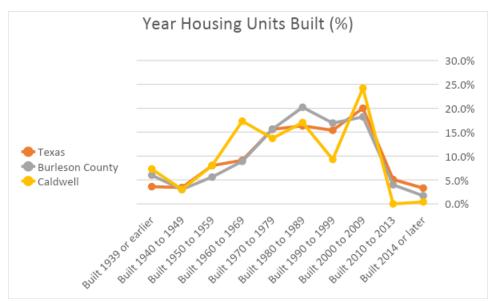


Figure 5.2: Age of Housing Stock. Source: U.S. Census Bureau, 2018. Table DP04

Since 2010, there has been proportionally less housing construction in Caldwell and Burleson County than across Texas as a whole, reflecting lower population growth in rural areas as compared to major urban areas. Burleson County has a larger share of housing stock dating from the 1980s and 1990s than Texas as a whole. Caldwell showed higher rates of housing construction during the 1960s and 2000s, with particularly low construction rates during the 1990s and 2010s, as shown in Figure 5.2.

Households in Caldwell and Burleson County show greater permanence than the Texas average, with the average household moving into their current residence before 2010 (as of 2018). For Texas as a whole, the average household moved in between 2010 and 2014. Notably, the percentage of households who have lived in the same address since 1989 or earlier is significantly higher in Caldwell (14.9%) and Burleson County (19.6%) than for Texas as a whole (10.3%). In Burleson County, the percentage of households who have moved since 2009 is particularly low at 36.7%, as compared to 46.9% in Caldwell and 52% for all of Texas.

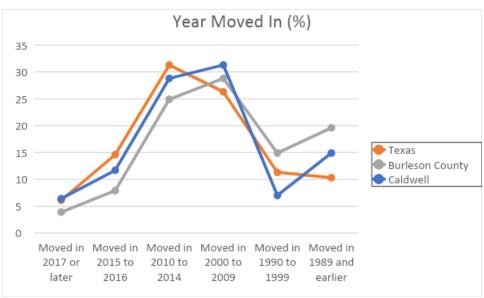


Figure 5.3: Year Moved into Current Residence. Source: U.S. Census Bureau, 2018. Table DP04

The number of long-term residents in Burleson County may help build strong community ties and a sense of place. On the other hand, the high number of part-time residences suggests that a significant population whose primary residences are elsewhere may regularly visit the county. Housing vacancy will be discussed in more detail in section 5.4.

5.2 Housing Type

Across all jurisdictions studied here, 2018 ACS data showed that the most common housing type was single-family detached, comprising roughly two-thirds of housing units across all levels of study – namely, 65.2% of housing units in Texas, 63.9% in Burleson County, and 69.3% in Caldwell.³⁵ However, the composition of housing stock was substantially different between the city and county levels, with more multi-family housing in Caldwell and more mobile homes in Burleson County (as shown in Figure 5.4). Less than 5% of Burleson County homes were multi-family structures, while over 30% of housing units were mobile homes. In Caldwell, 17.5% of dwellings were in multi-family structures, of which roughly one third were

³⁵ U.S. Census Bureau. (2018). American Community Survey 2018 5-Year Estimates: Table DP04. https://data.census.gov/cedsci/table?q=DP04%3A%20SELECTED%20HOUSING%20CHARACTERISTICS&g=0400000 US48_0500000US48051_1600000US4811836&tid=ACSST5Y2018.DP04&hidePreview=true&vintage=2018.

duplexes and roughly half were structures containing 3-9 units. 13.3% of dwellings in Caldwell were mobile homes, higher than the figure statewide (7.2%), but substantially less than in rural portions of Burleson County. Since mobile homes are generally more vulnerable to natural hazards than site-built homes, this may be an area of concern for Burleson County resiliency planning. Additionally, along with site-built single- and multi-family units and mobile homes, a small number of county households (40, or 0.4% of the total) were reported to live in vans, recreational vehicles (RVs), or boats.³⁶

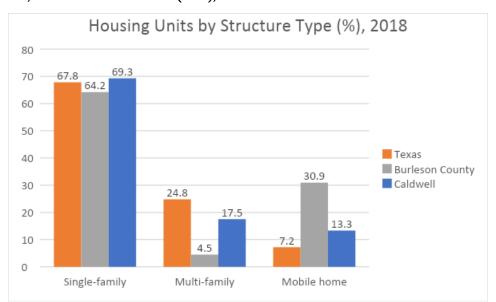


Figure 5.4: Housing Units by Structure Type. Source: U.S. Census Bureau, 2018: Table DP04

5.3 Households

According to 2018 ACS data, approximately half of all households in Caldwell, Burleson County, and Texas were married-couple families. Other types of families, including single-parent households, comprised 13.9% of households in Caldwell and 14.7% of Burleson County households, somewhat less than the state average of 19%.³⁷ The majority of these families had a female head of household, with a higher ratio of female-headed to male-headed households in Caldwell than for Burleson County as a whole.

³⁶ U.S. Census Bureau. (2018). Table DP04.

³⁷ U.S. Census Bureau. (2018). Table S2501.

A smaller percentage of Caldwell and Burleson County households had related children under 18 at home than the Texas average – 32.1% and 25.7%, respectively, versus a state average of 36.7%. In all cases, less than 5% of households reported living with related children who were not their own.³⁸

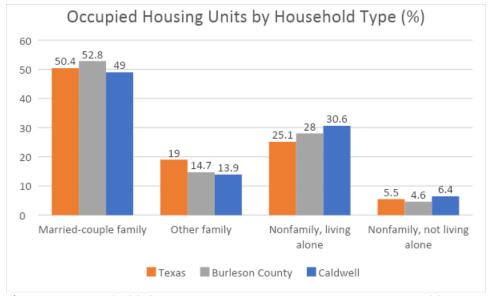


Figure 5.5: Households by Type. Source: U.S. Census Bureau, 2018: Table S2501

As shown in Figure 5.5, Caldwell and Burleson County reported greater percentages of non-family households than Texas as a whole. The bulk of this difference appears to come from a larger share of single-person households, comprising 30.6% of total households in Caldwell and 28% in Burleson County as compared to 25.1% of Texas households. Slightly fewer non-family households included multiple persons, perhaps reflecting that roommate situations are more typically associated with urban areas and college towns than with smaller cities and rural areas. These households were generally young (under 35 years old).

Caldwell and Burleson County appear to have older populations than the Texas average.

11.9% of Caldwell households, and 15.6% of Burleson County households were married couples over 65 years old, compared to 9.5% of Texas households. The majority of single heads of households over age 65 were female across Texas and Burleson County, while in Caldwell the majority of these householders were male.

³⁸ U.S. Census Bureau. (2018). Table S2501.

Individuals over age 65 living alone comprised a greater share of Burleson County households (12.6%) than in Caldwell (8.4%) or Texas as a whole (8.2%). These individuals may be at greater risk of injury and illness due to their age and the absence of other household members to take care of them or request medical attention.

5.4 Housing Occupancy and Tenure

Beyond the composition of each household, the tenure of each occupied home (owner-occupied or rented), and the proportion of vacant homes can also provide meaningful information about the demographics and economics of each area of study. A number of distinct patterns in household occupancy and tenure can be observed between Texas, Burleson County, and Caldwell.

While trends for Caldwell and Texas as a whole are similar, with roughly 10% of homes reported as vacant, and owner-occupied housing units making up a little over 60% of occupied dwellings, the trends for Burleson County are significantly different. More than one in four homes in the county are vacant, while almost 80% of occupied dwellings are owner-occupied, as shown below in Figure 5.6.

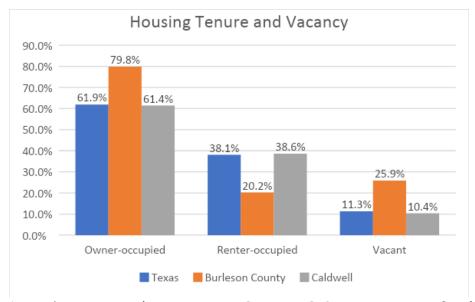


Figure 5.6: Housing Tenure and Vacancy Rates. Source: U.S. Census Bureau, 2018: Table DP04

Roughly half of homes in Burleson County reported as vacant homes are dedicated to seasonal, recreational, or occasional use,³⁹ which may include vacation homes (especially around Lake Somerville), hobby farms, family ranches, and hunting lodges. 43% of vacant homes in the county were reported as "other", which includes foreclosures and homes under repair, in need of repairs, or being used for storage, as well as vacancies due to legal and ownership issues or absent owners or occupants.⁴⁰ Caldwell has a smaller percentage of occasional residences than the county average (18.8%), but a high proportion (18.8%) of dwellings which have been purchased but not occupied. Very few units on the rental market were unoccupied in Caldwell and Burleson County, while across Texas, housing vacancy was most commonly due to units being for rent.⁴¹

Both Caldwell and Burleson County have much lower rental vacancy rates (o and o.4%, respectively) than the state average (7.7%), suggesting low rental turnover. The fact that not a single home in Caldwell was reported as "for rent" at the time the data was collected would appear noteworthy; however, the majority of survey responses only provided "other" as a reason for rental vacancy, and the margin of error for Caldwell data is relatively large due to its small population. Owner-occupied housing had very low vacancy rates across all three geographies, with a slightly lower rate in Burleson County (1.3%) than for Texas as a whole (1.6%). The homeowner vacancy rate for Caldwell was reported as 0%, although once again, there may be issues with data validity at this scale.

Table 5.2: Housing occupancy

HOUSING OCCUPANCY	Texas		Burleson	County	Caldwell	
	Estimate	Percent	Estimate	Percent	Estimate	Percent
Total housing units	10,769,900	100.0%	9,109	100.0%	1,685	100.0%
Occupied housing units	9,553,046	88.7%	6,754	74.1%	1,509	89.6%
Vacant housing units	1,216,854	11.3%	2,355	25.9%	176	10.4%
For rent	308,747	25.4%	6	0.3%	0	0.0%
Rented, not occupied	57,160	4.7%	49	2.1%	0	0.0%

³⁹ U.S. Census Bureau. (2018). American Community Survey 2018 5-Year Estimates: Table B25004. https://data.census.gov/cedsci/table?q=B25004%3A%20VACANCY%20STATUS&g=0400000US48_0500000US480_0500000US4811836&hidePreview=true&tid=ACSDT5Y2018.B25004&vintage=2018.

⁴⁰ U.S. Census Bureau. (n.d.). Definitions and Explanations. Retrieved from https://www.census.gov/housing/hvs/definitions.pdf.

⁴¹ U.S. Census Bureau. (2018). Table B25004.

For sale only	95,712	7.9%	71	3.0%	0	0.0%
Sold, not occupied	51,988	4.3%	69	2.9%	33	18.8%
Seasonal, recreational, or						
occasional use	251,097	20.6%	1,147	48.7%	33	18.8%
For migrant workers	2,974	0.2%	0	0.0%	0	0.0%
Other vacant	449,176	36.9%	1,013	43.0%	110	62.5%
Homeowner vacancy rate	1.6%		1.3%		0.0%	
Rental vacancy rate	7.7%		0.4%		0.0%	

Source: U.S. Census Bureau, 2018: Tables DP04 and B25004

As noted above, smaller average household sizes in Caldwell and Burleson County than the state average appear to be driven by a large number of single-person households. This trend of smaller household size derives from patterns within owner-occupied housing, which represents the majority of dwellings within each jurisdiction. However, renter households are on average slightly larger in Caldwell and Burleson County than for Texas as a whole, with Burleson County renter households notably larger than owner-occupier households, as shown in Table 5.3. This makes Burleson County somewhat of an outlier, as average household sizes are larger for owner-occupied units than for rented units in Caldwell and across Texas as a whole.

Table 5.3: Housing occupancy by tenure

HOUSING TENURE	Texas		Burleson County		Caldwell	
Owner-occupied	5,917,771	61.9%	5,390	79.8%	926	61.4%
Owner-occupied with a mortgage	3,421,912	57.8%	1,718	31.9%	318	34.3%
Owner-occupied, no mortgage	2,495,859	42.2%	3,672	68.1%	608	65.7%
Renter-occupied	3,635,275	38.1%	1,364	20.2%	583	38.6%
Avg. household size, owner-oc	2.99	2.59		2.77		
Avg household size, renter-occupied		2.64	2.73		2.69	

Source: U.S. Census Bureau, 2018: Table DP04

As Table 5.3 shows, a similar proportion of homes in Caldwell to the state average are rented, while the Burleson County housing market is dominated by owner-occupied housing to a much greater degree (79.8% of housing units, versus 61.9% at the state level and 61.4% in Caldwell). At the state level, the majority of owner-occupied units carried a mortgage, while at the city and county levels less than one third did (see Figure 5.7). This may be due to broader use of non-mortgage financial instruments for purchasing homes (such as rent-to-own or owner financing schemes), or a greater proportion of properties being inherited or fully paid off.

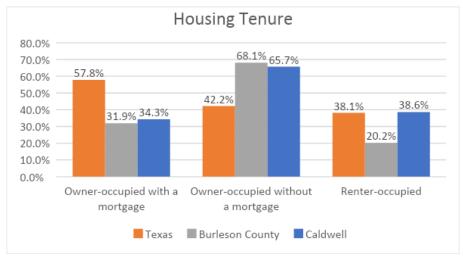


Figure 5.7: Housing Tenure. Source: U.S. Census Bureau, 2018. Tables DP04 and B25004

5.5 Housing Prices

Home prices in Caldwell and Burleson County are lower than the Texas average, with median home values for the city and county roughly 30% lower than the state median (Table 5.4). Approximately 45% of homes in the city and county are worth less than \$100,000, compared to only 28% of Texas homes. Relatively fewer homes are worth \$500,000 or more compared to Texas trends (2.9% of homes in Caldwell and 5.6% of homes in Burleson County). 42

Table 5.4: Median Home Values

HOME VALUES	Texas	Burleson County	Caldwell
Median home value	\$161,700	\$109,800	\$107,400
% of state median	1	67.9%	66.4%

Source: U.S. Census Bureau, 2018: Table DP04

39

⁴² U.S. Census Bureau. (2018). Table DP04.

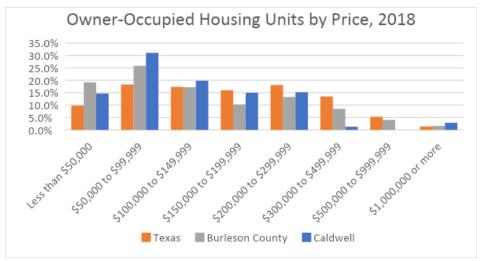


Figure 5.8: Owner-Occupied Housing Units by Price. Source: U.S. Census Bureau, 2018: Table DP04

5.6 Housing Affordability

Nominal housing costs in Caldwell and Burleson County are below the Texas average, including both ownership costs and rents (Table 5.5). However, while home prices are similar in Caldwell and Burleson County as a whole (Table 5.4), ongoing costs of housing (which may include property taxes, utilities, and building or community fees) are higher in Caldwell than the rest of the county (Table 5.5).

Selected Monthly Ownership Costs (SMOC) for homeowners within each area of study are compiled by the Census Bureau and include payments for mortgages and other home financing, property taxes, home and flood insurance, basic utilities, heating, and building or homeowner's association (HOA) fees.⁴³ At all geographic levels, the median cost for homeowners with mortgages is approximately triple that of owners without a mortgage, with the median rent roughly in the middle of these two values. Burleson County's median rent is roughly 27% lower than the state average, while Caldwell's median rent is approximately 23% lower than the Texas average.

⁴³ U.S. Census Bureau. (n.d.) Median Selected Monthly Owner Costs - Housing units with a mortgage and without a mortgage. Retrieved from https://www.census.gov/quickfacts/fact/note/US/HSG651218.

Table 5.5: Median Monthly Ownership Costs (SMOC) and Rent

OWNER							
COSTS	Texas		Burlesor	า County	Caldwell		
Median	With a	No	With a	No	With a	No	
monthly cost	mortgage	mortgage	mortgage	mortgage	mortgage	mortgage	
of ownership	\$1,549	\$500	\$1,214	\$381	\$1,270	\$407	
Median rent	\$9	98	\$7	32	\$7	64	

Source: U.S. Census Bureau, 2018: Table DP04

While utility costs usually depend on household consumption, other home ownership costs depend on assessed value, including property taxes, which can be one of the costliest parts of home ownership. For Caldwell, median real property taxes for housing units with mortgages in 2017 were \$3,009, while median property taxes for units without a mortgage were \$1,104.44

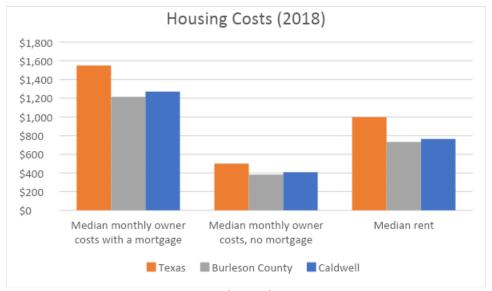


Figure 5.9: Median Monthly Ownership Costs (SMOC) and Rent. Source: U.S. Census Bureau, 2018: Table DP04

⁴⁴ City-Data.com. (n.d.). Caldwell, Texas. Retrieved from http://www.city-data.com/city/Caldwell-Texas.html.

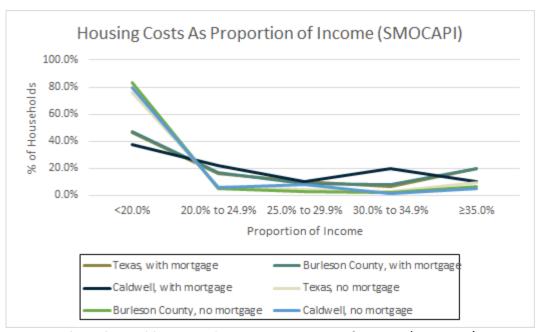


Figure 5.10: Selected Monthly Ownership Costs as Percent of Income (SMOCAPI). Source: U.S. Census Bureau, 2018: Table DP04

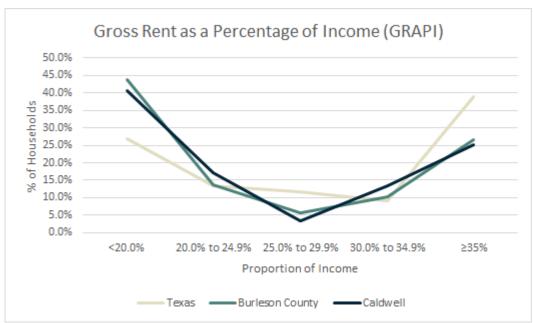


Figure 5.11: Gross Rent as a Percent of Income (GRAPI). Source: ACS Table DPo4 (U.S. Census Bureau, 2018)

Despite the lower absolute costs of housing in Caldwell and Burleson County compared to the Texas average, lower incomes than the state average mean that the financial burden of renting or owning a home in Caldwell and Burleson County is similar to, or greater than, the Texas average. Burleson County appears to mirror statewide trends in relative housing costs, while the distribution of housing costs relative to income in Caldwell appears to be

"flatter", more constant than in Burleson County or Texas as a whole, with lower percentages of Caldwell homeowners with mortgages spending less than 20%, or over 35%, of their monthly income on housing (Figure 5.9). For all geographies, a downward trend is evident, with the largest single cohort paying less than 20.0% of monthly income for housing. However, almost 20% of Burleson County and Texas households devote over 35% of their income to housing, a level which can create severe financial stress.

Perhaps unsurprisingly, homeowners who have mortgages generally spend a larger proportion of their income on housing than those who do not. Housing costs for Caldwell and Burleson County homeowners without mortgages are proportionally lower than the Texas average, with approximately 80% of these households spending less than 20% of their monthly income on housing (as shown in Figure 5.10).

Across all jurisdictions, the share of income spent on rent shows a bimodal distribution. However, renters in Caldwell and Burleson County appear to be generally less financially burdened than the state average. 40.6% of Caldwell renters, 43.8% of Burleson County renters, and 26.9% of Texas renters pay less than 20% of their monthly income as rent. On the other hand, 25.3% of Caldwell renters, 26.7% of Burleson County renters, and 38.9% of Texas renters spend 35% or more of their monthly income on rent (Figure 5.11). Rental costs in Caldwell appear to be in line with those in the rest of Burleson County, with a majority of households spending less than 25% of their monthly income on rent.

6. Economy

6.1 Jobs and Incomes

Of total Burleson County jobs (numbering just over 2,000 in 2017), 23% were located in Caldwell, in line with the county seat's share of population. A number of fabrication and oilfield-related businesses are located within the industrial park on the northwest side of the city. 8% of county jobs were located in Somerville, slightly more than the city's share of county population.⁴⁵ These included the Koppers, Inc. tie and post plant.

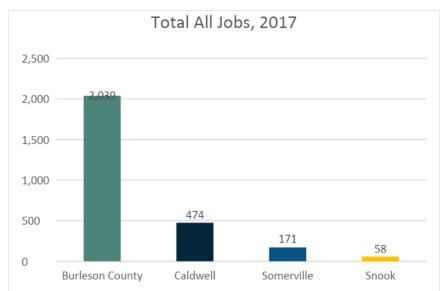


Figure 6.1: Jobs in Burleson County, Caldwell, Somerville, and Snook. Source: BEA (2019)

The agricultural sector in Burleson County is about 60% livestock farming and 40% produce. Cattle ranching is by far the largest single subsector with nearly \$24 million of sales conducted in the county during the 2017 fiscal year. Cattle alone accounted for more business than all produce sold in the county that year. Poultry farming makes up the next largest single subsector in the local economy at \$11.6 million of business. Cotton, grains, and vegetables represent the next three largest sectors, at \$6.3, \$5.5, and \$5.3 million, respectively. Hay represents the largest crop in the county by acreage, with 57% of the county's tilled land devoted to its production.

44

⁴⁵ U.S. Census Bureau CES. (2017). OnTheMap.

In Texas, statewide, cattle ranching is by far the largest proportion of agricultural business, at 49.3% of all agricultural sales in 2017. While the ranching sector is the largest in Burleson County as well, at 40.2% of the local agricultural economy, it appears to be less overwhelmingly important for Burleson County than in less fertile regions of Texas. In terms of livestock, Burleson County does see 66% more sales in poultry and eggs than the Texas average. The true specialty of Burleson County's agricultural sector, however, is in the "Vegetables, Melons, Potatoes and Sweet Potatoes" category, where the county's output is nearly six and a half times as high as the Texas average.

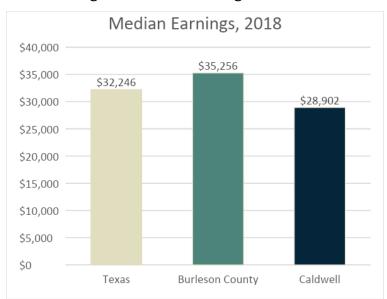


Figure 6.2: Median Earnings, 2018. Source: ACS Table S2001 (U.S. Census Bureau, 2018)

Median earnings for all jobs in the county were almost 10% higher than the Texas median, although the figure was just over 10% below the state median in Caldwell.⁴⁶ This may be the result of a concentration of service jobs in the city, which tend to be somewhat lower-wage. By contrast, in rural areas of the county, jobs in mining, quarrying, and oil and gas extraction, which tend to be higher paying, may make up a larger share of employment.

A number of economic statistics by sector are shown in Table 6.1.

⁴⁶ U.S. Census Bureau. (2018). American Community Survey 2018 5-Year Estimates: Table S2001. Retrieved from https://data.census.gov/cedsci/table?q=Earnings%20%28Individuals%29&g=0400000US48_0500000US48051_16 <a href="https://doi.org/10.1001/1

Table 6.1: Economic Statistics, Burleson County

NAICS Industry Sector	Burleson Employment	Burleson Share	Texas Employment	TX Share	LQ	Basic employment	Non-basic Employment	Jobs required to be self- sufficient
Total all jobs	3,196	100%	9,431,513	100%		903	2,293	О
Agriculture, Forestry, Fishing and Hunting	127	4.00%	56,554	0.60%	6.67	108	19	-
Mining, Quarrying, and Oil and Gas Extraction	258	8.100%	213,197	2.300%	3.52	185	73	-
Utilities	10	0.30%	48,507	0.50%	0.60	-	10	7
Construction	532	16.60%	687,704	7.30%	2.27	298	234	-
Manufacturing	313	9.80%	838,924	8.90%	1.10	29	284	-
Wholesale Trade	142	4.40%	570,923	6.10%	0.72	-	142	55
Retail Trade	673	21.10%	1,229,290	13.00%	1.62	258	415	-
Transportation and Warehousing	175	5.50%	441,828	4.70%	1.17	25	150	-
Information	8	0.30%	194,686	2.10%	0.14	-	8	48
Finance and Insurance	121	3.80%	517,473	5.50%	0.69	-	121	54
Real Estate and Rental and Leasing	18	0.60%	203,936	2.20%	0.27	-	18	48
Professional, Scientific, and Technical Services	73	2.30%	728,263	7.70%	0.30	-	73	171
Management of Companies and Enterprises	-	0.00%	129,373	1.40%	-	-	-	O
Administration & Support, Waste Management and Remediation	55	1.70%	715,347	7.60%	0.22	-	55	191
Educational Services	-	0.00%	152,264	1.60%	-	-	-	0
Health Care and Social Assistance	251	7.90%	1,281,190	13.60%	0.58	-	251	181
Arts, Entertainment, and Recreation	17	0.50%	113,958	1.20%	0.42	-	17	24
Accommodation and Food Services	321	10.00%	1,007,599	10.70%	0.93	-	321	22
Other Services (excluding Public Administration)	102	3.20%	300,496	3.20%	1.00	-	102	-

Source: US Census LEHD LODES Data 2017, accessed through OnTheMap dashboard

6.2 Industry Specialization by Employment Share

Retail makes up the largest portion of the Burleson County economy at 21.1% of all jobs, with construction as the second largest sector, at 16.6%. Traditionally "white collar" fields that would tend to require a bachelor's, masters or professional degree, such as Finance and Insurance, Real Estate and Rental and Leasing, Professional, Scientific, and Technical Services, and Management of Companies and Enterprises only comprise 7% of the local economy in Burleson County. The low proportion of jobs that would typically require higher education, and the high proportion of workers commuting outside the county, suggest that

many of the 17% of county residents with bachelor's degrees may commute to other regions in search of greater employment opportunities.

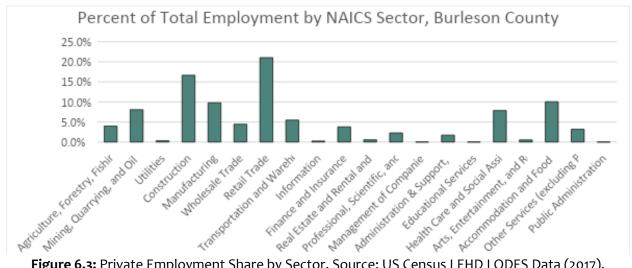


Figure 6.3: Private Employment Share by Sector. Source: US Census LEHD LODES Data (2017), accessed through OnTheMap dashboard

6.3 Location Quotient Analysis

A location quotient is a rough economic statistic that compares a given industry's proportion of employment within its immediate region to that industry's share of jobs in a larger region. Location quotient analysis can be used to assess which industries primarily serve local demand (non-basic sectors) and which export production in excess of local needs (basic). The location quotient figures shown in Table 6.1 use Texas as the benchmark region, dividing the percentage of local employment in each sector by the corresponding share of state employment in that industry. The location quotient process makes several assumptions namely, that demand for each sector is the same between the areas of study and the benchmark region; that productivity per worker is the same across all areas, and that local demand is fully met by local production before importing comparable goods. Agriculture makes up the largest location quotient in the region at a very large 6.67, meaning that there is a general surplus of employment in those sectors over the state's proportion. Mining, quarrying, and oil and gas extraction make up the second largest location component at 3.52, followed by construction at 2.27. At location quotients above 2.0, these sectors are significantly overrepresented in the Burleson County economy when compared to Texas as a whole. Retail trade, transportation and warehousing, and

manufacturing also eclipse the 1.0 mark, meaning that they are export industries, but not to such a dramatic extent that it would likely be considered a regional specialization. The other services category (including equipment repairs, laundry and dry-cleaning, and a number of services typically offered by religious and nonprofit organizations) has perfect equilibrium with the state of Texas, with a 1.0 location quotient.

For sectors with LQ < 1, there may be potential for employment growth to meet assumed demand, as shown in the rightmost column in Table 6.1.

At a location quotient of only 0.58, the healthcare system in Burleson County may be experiencing a labor shortage. This is not uncommon in rural areas, but may still constitute a potential cause for concern, particularly as the county's large middle-aged cohort reaches retirement age and is then statistically more likely to need regular healthcare procedures.

6.4 Economic Base Multiplier Analysis

A further measure of measuring the importance of different industries is economic base multiplier analysis, calculated by dividing total employment by basic employment for basic industries. This measure is used to estimate flow-on employment effects from export-oriented production, relying on the fact that an "increase in export demand for a region's goods and services will create additional economic activities beyond the initial...inflow of spending." Sectors with higher employment multipliers are especially effective at generating indirect employment.⁴⁷ For Burleson County, manufacturing is the industry with the highest multiplier by far.

6.5 Economic Growth

Between 2012 and 2017, total employment in Texas grew each year, for total growth over the 5-year period of roughly 11%. While Texas experienced a strong rebound after the 2007-2009 global recession, in Burleson County, total employment declined by approximately 6%, from 9,011 to 8,476. This suggests that smaller areas may be more vulnerable to external economic shifts than larger ones.

⁴⁷ Wang, X., & vom Hofe, R. (2007). Research Methods in Urban and Regional Planning. Beijing: Tsinghua University Press.

To break down recent economic trends in Burleson County more precisely, shift-share analysis can be employed. This method can help identify if local employment growth or decline is due to specific local factors or broader trends at a state or national level, comparing the performance of each industry within the study area. Table 6.2 shows the results of a shift-share analysis for Burleson County compared to Texas from 2012 to 2017. Figures in the "NG" columns indicate projected growth for each sector based on statewide employment growth across all sectors, without differentiating between better- and worse-performing sectors. Figures in the "IM" columns show predicted changes in local employment in each sector based on employment growth in that sector across the benchmark region of Texas, while the "RG" columns compare changes in employment for each industry locally to changes in job numbers by industry at the statewide level.

Table 6.2: Employment growth calculations by industry sector, Burleson County 2012-2017

Burleson County	2012	NG	IM	RG	Absolute Change	2017
Total All Jobs	9,011	1047	-190	-1391	-535	8,476
Agriculture, Forestry, Fishing and Hunting	147	17	-9	-46	-38	109
Mining, Quarrying, and Oil and Gas Extraction	457	53	-137	-104	-188	269
Utilities	91	11	-9	-28	-27	64
Construction	671	78	101	-126	53	724
Manufacturing	868	101	-118	-110	-127	741
Wholesale Trade	385	45	-11	19	53	438
Retail Trade	989	115	6	-77	44	1,033
Transportation and Warehousing	207	24	13	5	42	249
Information	103	12	-11	-47	-46	57
Finance and Insurance	242	28	2	-37	-7	235
Real Estate and Rental and Leasing	128	15	10	-30	-5	123
Professional, Scientific, and Technical Services	354	41	30	-20	51	405
Management of Companies and Enterprises	40	5	13	14	31	71
Administration & Support, Waste Management and Remediation	335	39	10	-7	42	377
Educational Services	1,497	174	-58	-426	-310	1,187
Health Care and Social Assistance	1,020	118	23	-201	-60	960
Arts, Entertainment, and Recreation	79	9	13	-17	5	84
Accommodation and Food Services	644	75	63	7	145	789
Other Services (excluding Public Administration)	266	31	-6	-81	-56	210
Public Administration	488	57	-116	-78	-137	351

Source: OnTheMap

Although Texas had strong overall job growth, the overall negative value in the industry mix (IM) column indicates that Burleson County's industry mix put it at a relative disadvantage. More specifically, the downturns at the national level in mining, quarrying, and oil and gas extraction and manufacturing seem to be the source of much of the county's job losses over this time period. Indeed, this period was marked by a dramatic drop in commodity prices and anguish over the role of automation and offshoring in manufacturing job losses. The also-significant decreases in education and public administration jobs statewide may be due to public sector cost-cutting or changes in reporting.

At the local level, many of the job losses in various industries may be due to flow-on effects from the downturns in natural resources and manufacturing. The resource sector may have been especially hard-hit due to generally higher costs for unconventional oil and gas production, which is the dominant form of extraction used in Burleson County to access the Eagle Ford Shale formation.^{48 49} The significant job losses in healthcare and education, on the other hand, may be due to consolidation of these services in urban regions such as Bryan/College Station and Austin. While this may be more cost-effective for providers, it is important to ensure Burleson County residents have convenient access to these services.

6.6 Job Density and Flows

6.6.1 Employment Inflows and Outflows

Burleson County's labor force is largely not retained within the county limits during the workday, as over 80% of all employed Burleson County residents (some 5,203 total workers) reported leaving the county for employment, with Bryan/College Station and Houston being the three most common exterior locations for commuters. Caldwell was by far the most

⁴⁸ Railroad Commission of Texas. (2020). Eagle Ford Shale Information. Retrieved from https://www.rrc.state.tx.us/oil-gas/major-oil-and-gas-formations/eagle-ford-shale-information.

⁴⁹ Rystad Energy. (2015). Core part of the Eagle Ford in the money even at the oil price below \$40. *Shale Newsletter*. Retrieved from https://www.rystadenergy.com/newsevents/news/newsletters/usarchive/shalenewsletter-november-2015.

common destination for internal commutes and non-residents commuting to Burleson County, followed by Somerville and then Snook.

Only 347 workers reported both living and working within the City of Caldwell.

There were 1553 workers living outside Caldwell employed within the city, and 1,666 workers living in Caldwell but commuting outside to work.⁵⁰

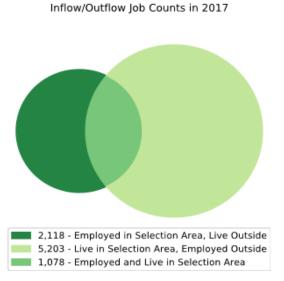


Figure 6.4: Burleson County Employment Inflow and Outflow, 2017. Source: US Census LEHD LODES

Data 2017, accessed through OnTheMap dashboard

Inflow/Outflow Job Counts in 2017

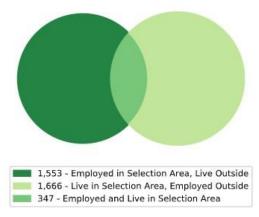


Figure 6.5: Employment Inflow and Outflow, 2017. Source: US Census LEHD LODES Data 2017, accessed through OnTheMap dashboard

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⁵⁰ U.S. Census Bureau CES. (2017). OnTheMap.

6.6.2 Jobs by Distance

As shown in Figure 6.6, job distribution for both Burleson County and Caldwell shows a bimodal distribution (although with somewhat different magnitudes for county and city workers). Almost half of all jobs held by Caldwell residents are located within 24 miles, and over 20% are located within 10 miles. However, over 40% of Caldwell residents commute over 50 miles each way to work. While only 14.3% of Burleson County residents have commutes of less than 10 miles each way, over 40% have a commute of less than 25 miles – but, on the other hand, 46.6% travel more than 50 miles each way to work.⁵¹

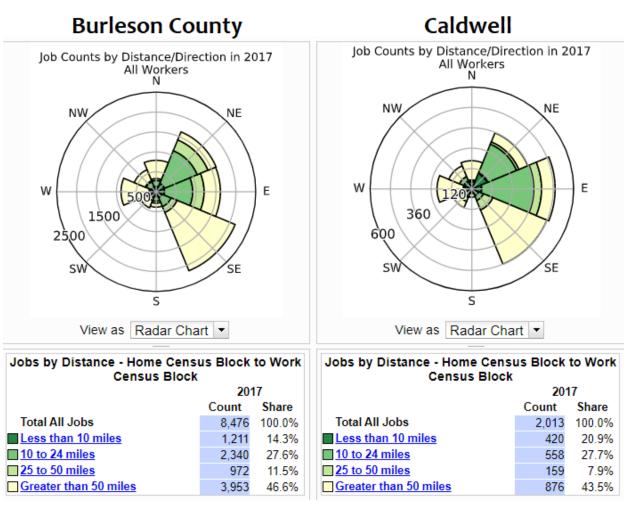


Figure 6.6: Job Counts by Distance and Direction, 2017. Source: US Census LEHD LODES Data 2017, accessed through OnTheMap dashboard

52

⁵¹ U.S. Census Bureau CES. (2017). OnTheMap.

6.6.3 Employment Density

Employment concentrations can be shown on job density maps published by the U.S. Census Bureau Center for Economic Studies, shown below in Figures 6.7 and 6.8. Jobs appear to be fairly evenly distributed throughout Burleson County, although with larger clusters in Caldwell, Somerville, and Snook (in decreasing order of size).

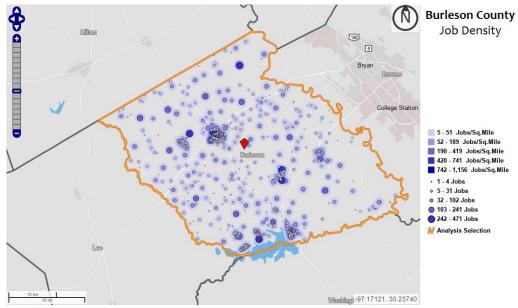


Figure 6.7: Burleson County Job Density, 2017. Source: U.S. Census Bureau CES (2017)

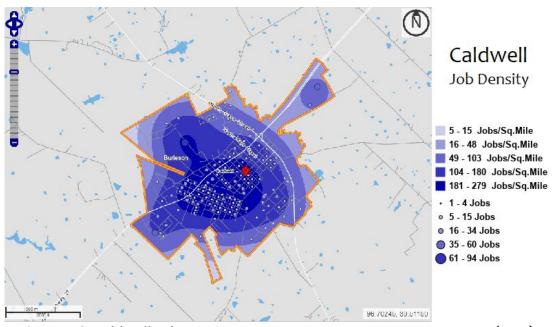
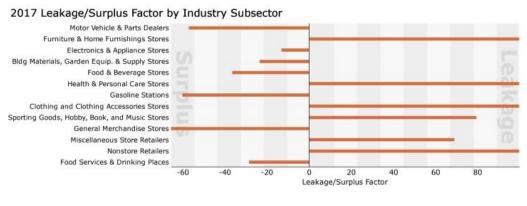


Figure 6.8: Caldwell Job Density, 2017. Source: U.S. Census Bureau CES (2017)

6.7 Leakage and Surplus

Using Esri Business Analyst's retail directory, the capacity of local retail in a number of distinct industry sectors can be compared to estimated demand based on demographic and economic data. Particularly underserved sectors include motor vehicles, parts, and accessories, grocery and specialty food stores, restaurants, gas stations, and general retail (such as department stores).⁵²



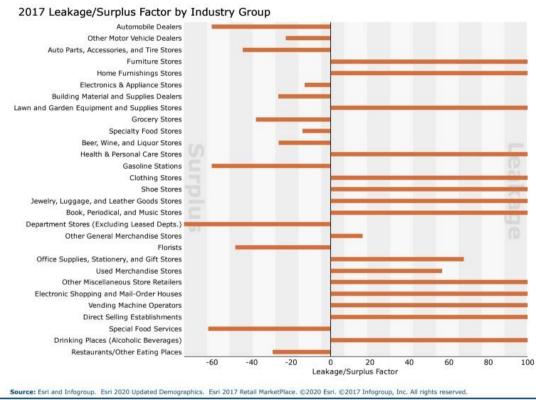


Figure 6.9: Surplus and Leakage, 2017. Source: Esri Business Analyst Retail MarketPlace(2017)

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⁵² Esri. (2017). Retail MarketPlace.

Where local retail capacity is insufficient for projected demand, leakage exists. A surplus is generated when local retail capacity exceeds projected local demand, drawing customers from outside the study area. As for the destination of "leaked" consumer demand, it can be assumed that there is some leakage of professional jobs and specialty retail to Brazos County and the Bryan/College Station area due to that area's proximity and critical mass (with more than 10 times the population and one of the nation's largest university campuses). In more specialized fields, leakage to the Austin and Houston areas is assumed.

6.8 Economic Development Initiatives

Local economic development efforts are led by the Burleson County Economic Development Corporation. The EDC sponsors studies of community needs and business demand assists prospective businesses with site selection and setting up in the county, and offers financial incentives. The EDC emphasizes the strong support for businesses among Caldwell, Somerville, Snook, and county leaders. One of the main economic initiatives is the industrial park, located on the north side of Caldwell adjacent to the BNSF Railroad.

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⁵³ Burleson County EDC. (2019). Retrieved from https://bctxedc.com/.

7. Environment

7.1 Ecoregions

Ecoregions denote areas with generally similar flora, fauna, terrain, climate, and other environmental characteristics. ⁵⁴ They are used to organize ecosystem management strategies between different levels of government and nongovernmental organizations that are responsible for natural resources within the same geographical areas. ⁵⁵ A standard classification system with four levels is used for all of North America. Burleson County, and indeed much of central Texas, is located in a transition zone between Eastern Temperate Forests and the Great Plains. More precisely, Caldwell is located in the Post Oak Savannah Ecological Region, characterized by rolling to hilly land and 35 to 45 inches of annual rainfall. Bottomland soils include clay loam and clay, while elevated areas have a sandy loam or sandy soil. ⁵⁶ The majority of the region is covered by native grassland with intermittent post oaks, live oak, black hickory, and blackjack oak. Fire suppression since human settlement has allowed yaupon holly, cedar elm, sugarberry, and eastern red cedar to spread. ⁵⁷

⁵⁴ Environmental Protection Agency. (2018). Ecoregions. Retrieved from https://www.epa.gov/ecoresearch/ecoregions.

⁵⁵ Omernik, J. M., Chapman, S. S., Lillie, R. A., & Dumke, R. T. (2000). Ecoregions of Wisconsin. *Transactions of the Wisconsin Academy of Sciences, Arts and Letters*, 88, 77-103.

⁵⁶ Texas Parks & Wildlife. (n.d.). Plant Guidance by Ecoregions: Ecoregion 3 – Post Oak Savannah. Retrieved from https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/wildscapes/ecoregions/ecoregion_3.phtml.

⁵⁷ Texas A&M Forest Service. (2020). Texas Ecoregions: Post Oak Savannah. Retrieved from http://texastreeid.tamu.edu/content/texasEcoRegions/PostOakSavanah/

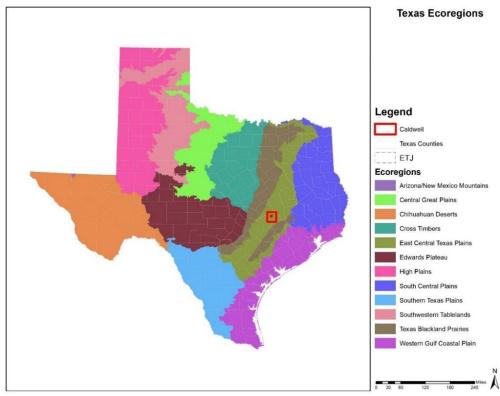


Figure 7.1: Texas Ecoregions. Source: EPA (2018)

7.2 Land Cover

Land cover maps, available from the U.S. Geological Survey, display land uses such as urbanized areas, wetlands, open waters, forest, and prairies.⁵⁸ These maps can also be used to determine the distribution of natural habitats to assist in comprehensive planning. Caldwell's land cover consists of hay and pastureland (28.7% of the city's area), developed open space (24.3%) and developed low-intensity (22.1%), and a small amount of deciduous forest.⁵⁹ The area covered by high-intensity development and developed open space has increased in recent years, as shown in Figure 7.2. Additionally, from 2011 to 2016, hay and pastureland cover increased from 14.95% to 28.7%. This land use is at higher risk of wildfires, so planners should be attentive to the risk of fire in peripheral urban areas of Caldwell.

⁵⁸ Copernicus Global Land Services (n.d.) Land Cover. Retrieved from https://land.copernicus.eu/global/products/lc#:~:text=Global%20Land%20Service-, Land%20Cover, hence%20captures%20land%20cover%20changes.

⁵⁹ United States Geological Survey (n.d.) National Land Cover Database. Retrieved from https://www.usgs.gov/centers/eros/science/national-land-cover-database?qt-science_center_objects=0#qt-science_center_objects.

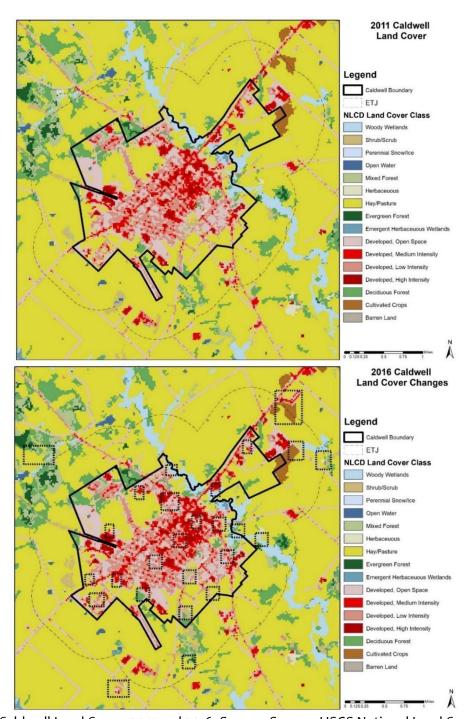


Figure 7.2: Caldwell Land Cover, 2011 and 2016. Source: Source: USGS National Land Cover Database

7.3 Watershed and Aquifers

Apart from surface water in rivers, streams, and lakes, large quantities of water may be obtained from underground sources called aquifers through wells or springs. Aquifers absorb rain that seeps through the ground. The majority of Texas counties have access to at least one aquifer. Caldwell overlies the Carrizo – Willcox aquifer. Water quality in this aquifer is generally good, with some areas of slightly saline to moderately saline water in the eastern and central portions of the aquifer. There is local aquifer contamination around Somerville due to improper chemical disposal by the railroad tie plant; remediation has been underway since the early 1980s. The stream of the aquifer contamination around some or the early 1980s.

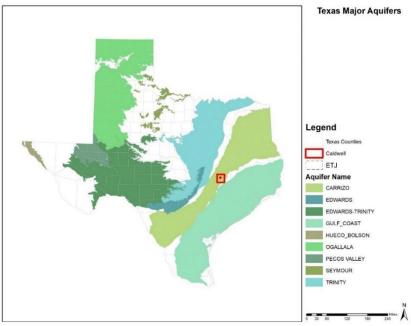


Figure 7.3: Major Aquifers of Texas. Source: Rosen (2020)

⁶⁰ Rosen, R. (n.d.). Aquifers and Springs. Retrieved June 10, 2020, from https://texasaquaticscience.org/aquifers-springs-aquatic-science-texas/.

⁶¹ Spivak, T. (2007, December 5). Toxic Town: Cancer and Birth Defects in Somerville. *Houston Press*. Retrieved from https://www.houstonpress.com/news/toxic-town-cancer-and-birth-defects-in-somerville-6575305.

7.4 Wetlands

Wetlands are areas where water saturates or covers the soil all or part of the time, affecting soil and plant development. Wetlands serve as animal and plant habitat, help recharge aquifers and reduce pollution and flooding, and may provide opportunities for recreation. However, wetland areas have vastly shrunk over the course of the nation's history. The main types of wetlands include freshwater emergent wetland, freshwater forested/shrub wetland, freshwater pond, and riverine. As seen in Figure 7.4, wetlands make up a small portion of Caldwell's area, with more located within the city's ETJ than within city limits. Due to the small number of wetlands within the city, efforts should be made to protect these areas from development.

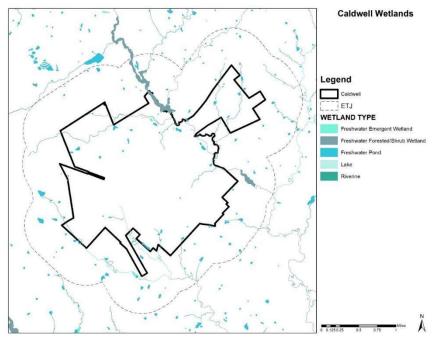


Figure 7.4: Wetland Areas in Caldwell. Source: U.S. Fish & Wildlife Services, National Wetlands Inventory

⁶² Environmental Protection Agency. (2018). What is a Wetland? Retrieved from https://www.epa.gov/wetlands/what-wetland.

⁶³ U.S. Fish & Wildlife Service. (2020). National Wetlands Inventory. Retrieved from https://www.fws.gov/wetlands/index.html.

⁶⁴U.S. Fish & Wildlife Service. National Wetlands Inventory: Download Seamless Wetlands Data. Retrieved from https://www.fws.gov/wetlands/data/data-download.html.

7.6 Vegetation

Apart from post oak forest, the area also includes open grassland forming part of the San Antonio Prairie subregion. The fertile grassland attracted settlers in the 1830s to an area southwest of Caldwell where a diverse range of vegetation such as wooly birch, autumn sage, thread-leaf yucca, virginia creeper, broomsedge, and late boneset can be found.⁶⁵ 7.7 Threatened and Endangered Species

Burleson County hosts 62 threatened and endangered species listed by the U.S. Fish and Wildlife Service, with the Post Oak Savannah providing important habitat for many native species. Large, regularly occurring fires historically influenced local fauna. After settlement, early land uses included livestock grazing, which led to a continuing decrease in wildlife diversity. Table 7.2 displays local threatened and endangered species. 66

Amphibians

Houston Toad, Woodhouse's Toad, Strecker's Chorus Frog, Southern Crawfish Frog

White-faced Ibis, Wood Stork, Swallow-Tailed Kite, Bald Eagle, Black Rail, Whooping Crane, Piping Plover, Rufa Red Knot, Franklin's Gull, Interior Least Tern, Western Burrowing Owl

Blackspot Shiner, Smalleye Shiner, Sharp-Nose Shiner, Chub Shiner, Silver-Band Shiner, Silver Chub Mammals

Southern Short-Tailed Shrew, Cave Myotis Bat, Tricolored Bat, Eastern Red Bat, Hoary Bat, Mexican Free-Tailed Bat, Big Free-Tailed Bat, Swamp Rabbit, Thirteen-Lined Ground Squirrel, Black-Tailed Prairie Dog, Woodland Vole, Long-Tailed Weasel, Mink, American Badger, Eastern Spotted Skunk, Plains Spotted Skunk, Mountain Lion

Reptiles

Eastern Box Turtle, Western Box Turtle, Smooth Softshell, Slender Glass Lizard, Keeled Earless Lizard, Texas Horned Lizard, Timber (Canebrake) Rattlesnake

Insects

American Bumblebee, Bombus variabilis, Melanoplus alexanderi

Mollusks

Brazos Heelspitter, Smooth Pimpleback, Texas Fawnsfoot

Plants

⁶⁵ Plant Guidance by Ecoregions. (n.d.). Retrieved August 13, 2020, from https://tpwd.texas.gov/huntwild/wild/wildlife_diversity/wildscapes/ecoregions/ecoregion_4.phtml.

⁶⁶ Texas Parks & Wildlife. (n.d.). Rare, Threatened, and Endangered Species of Texas. Retrieved from https://tpwd.texas.gov/gis/rtest/.

Branched Gay-Feather, Bristle Nailwort, Tree Dodder, Sayersville Blue Eyes, Texas Sandmint, Florida Pinkroot, Parks' Jointweed, Texas Cornsalad, Mohlenbrock's Sedge, Texas Sunnybell, Navasota Ladies'-Tresses

Table 7.2: Threatened and Endangered Species. Source: Texas Parks & Wildlife (n.d.).

7.8 Environmental Community Organizations

Founded in 2012, the Burleson County Wildlife Association seeks to educate members on wildlife habitat and conservation, maintain wetlands and other prime habitat, and control feral hog population. Another important conservation group is the Post Oak Savannah Groundwater Conservation District (POSGCD), covering Milam and Burleson Counties and created by the state legislature in 2001. The POSGCD manages groundwater usage in order to protect water availability and quality. Lastly, the Brazos River Authority handles water resources of the Brazos River Basin. It maintains reservoir and treatment systems along Texas's longest river.

7.5 Environmentally Significant Areas

Burleson County includes several waterways that provide valuable flora and fauna habitat, such as the Brazos River and Davidson and Yegua Creek. A small population and industrial presence contribute to generally good environmental conditions.

On the other hand, the wooden tie and post plant in Somerville has been a major toxic waste cleanup site due to the use of creosote and other wood-treatment chemicals. Coal-tar creosote, a carcinogen which is banned in more than 25 countries, continues to cause extremely high rates of cancer and birth defects despite cleanup efforts initiated following the 1980 publication of "Creosote Blues" by the Texas Observer. The plant, owned by the Santa Fe Railroad until the 1995 merger with Burlington Northern and the plant's sale to

⁶⁷ Burleson County Wildlife Association. (n.d.). Retrieved from https://www.burlesoncountywildlife.org/about.

⁶⁸ Post Oak Savannah Groundwater Conservation District. (2020). Mission & Jurisdiction. Retrieved from https://posgcd.org/mission-jurisdiction/.

⁶⁹ Brazos River Authority. (2020). Mission. Retrieved from https://brazos.org/About-Us/About-the-BRA.

⁷⁰ Sweeney, P. (2008, April 18). Creosote Blues Revisited. *Texas Observer*. Retrieved from https://www.texasobserver.org/2740-creosote-blues-revisited-nearly-30-years-later-a-wood-treatment-facility-continues-to-stain-

somerville/#:~:text=Almost%2028%20years%20ago%2C%20the,birth%20defects%2C%20among%20other%20ailment <u>s</u>.

Koppers, Inc., practiced improper disposal of chemical waste between the 1970s and 1990s. Creosote-permeated wood chips and sawdust were burned at night to hide the ensuing black smoke and fumes, while chemical sludge was allowed to drain into local creeks during floods. The same chemicals were used to control weeds and dust, while employees were not provided with information on the materials they were using, or adequate cleaning facilities. In 2006, benzopyrene, arsenic, and dioxin were found at levels up to 11,000 times EPA limits.⁷¹ A number of lawsuits against the railroad were dismissed or overruled in 2010 and 2011.⁷²

7.5.1 Brazos River

The Brazos River watershed includes all of Burleson County. Yegua Creek, which forms the county's southern border, is one of the river's five main tributaries. As the river's flow increases towards the southeast due to tributary inflows, water quality increases due to greater dilution of dissolved minerals. A number of water supply reservoirs are located along the Brazos and its tributaries, including Lake Somerville along Yegua Creek. Along the river are floodplain areas with rich soil, but elevated flood risk.

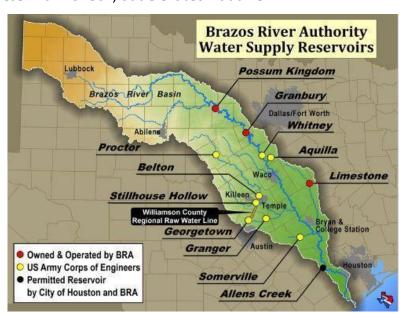


Figure 7.4: Brazos River tributaries and reservoirs. Source: Brazos River Authority (n.d.).

⁷¹ Spivak, T. (2007). Toxic Town: Cancer and Birth Defects in Somerville.

⁷² Faust v. BNSF Railway Company. (Tx. Ct. App. 2011). Retrieved from https://caselaw.findlaw.com/tx-court-of-appeals/1554305.html.

7.5.2 Davidson Creek and Elm Branch

Davidson Creek runs through Burleson County, northeast of Caldwell. The creek hosts vegetation such as scrub brush, cacti, grasses, water-tolerant hardwoods, and conifers.⁷³ Running southwest of the city is Elm Branch. The routes of the two watercourses around Caldwell are shown in Figure 7.5.

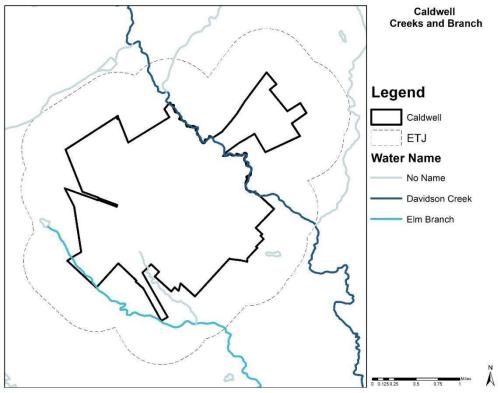


Figure 7.5: Watercourses around Caldwell. Source: U.S. Fish & Wildlife Service shapefiles (n.d.)

7.5.3 Lake Somerville

Lake Somerville is located approximately 28 miles south of Caldwell along Yegua Creek. The lake was created in 1968 after the construction of a reservoir by the US Army Corps of Engineers. The lake is a popular recreational destination for families, with fishing, swimming, camping, and hiking/biking available at a number of state and local parks surrounding the lake.

⁷³ Texas State Historical Association. (2010). *Davidson Creek (Milam County)*. Retrieved from https://tshaonline.org/handbook/online/articles/rbd10.

8. Hazards Vulnerability

8.1 Historical Disasters and Emergency Events

Texas is vulnerable to a number of hazards, including wildfires, tornadoes, hurricanes, and associated extreme wind and flooding events. Caldwell is not immune to these hazards, although its location away from the coast protects it from risks such as storm surge. The Federal Emergency Management Agency (FEMA) has declared 17 major disasters in Burleson County since 1953.⁷⁴

Table 8.1: Disaster Declarations in Burleson County

Year	Type of Disaster	Disaster Number
	2.	
1987	Severe Storms and Tornadoes	802
1991	Severe Thunderstorms	930
1993	Extreme Fire Hazard	3113
1994	Severe Thunderstorms and Flooding	1041
1998	Tropical Storm Charley	1239
	TX-Flooding 10/18/98	1257
1999	Extreme Fire Hazard	3142
2005	Hurricane Katrina	1606
	Hurricane Katrina Evacuation	3261
2006	Extreme Wildfire Threat	1624
2008	Wildfires	3284
	Hurricane Ike	1791
2015	Severe Storms, Tornadoes, Wind, Flooding	4223
2016	Severe Storms and Flooding	4272
2017	Hurricane Harvey	4332
2020	COVID-19	3458
	COVID-19 Pandemic	4485

Source: FEMA (2020)

⁷⁴Federal Emergency Management Agency. (2020). Disaster Declarations for States and Counties. Retrieved from https://www.fema.gov/data-visualization-disaster-declarations-states-and-counties.

8.2 Natural Hazards

8.2.1 Flooding

Due to Texas's size and location near the Gulf of Mexico, the state ranks as the most affected by floods. ⁷⁵ Several types of flooding have been defined, such as flash flooding, riverine flooding, urban flooding, and tropical flooding. Flash flooding, which often arrives without warning, poses the greatest risk to Caldwell residents, their property, and essential infrastructure. It can be the result of slow-moving or back-tracking thunderstorms or tropical storms and hurricanes.

Floodplain mapping, river flow and rainfall records, and other hydrological analysis are available on the FEMA website. The agency defines zones according to the probability of flooding within a given year, of which the most common are the 100-year, or 1 percent annual probability, special flood hazard area, and the 0.2% probability, or 500-year floodplain. Within Zone A, which has a 1% or greater chance of flooding in a given year, property owners are required to purchase flood insurance. Zone A areas for which projected flood water elevations have been calculated are classified as Zone AE, and can be found along Davidson Creek and Elm Branch. Small areas of 0.2% annual probability of flooding are located north of Davidson Creek.

⁷⁵Cutter, S. L. (Ed.). (2002). American Hazardscapes: The Regionalization of Hazards and Disasters. Washington, DC: Joseph Henry Press.

⁷⁶ FEMA (n.d.). Definitions of FEMA Flood Zone Designations. Retrieved from https://snmapmod.snco.us/fmm/document/fema-flood-zone-definitions.pdf.

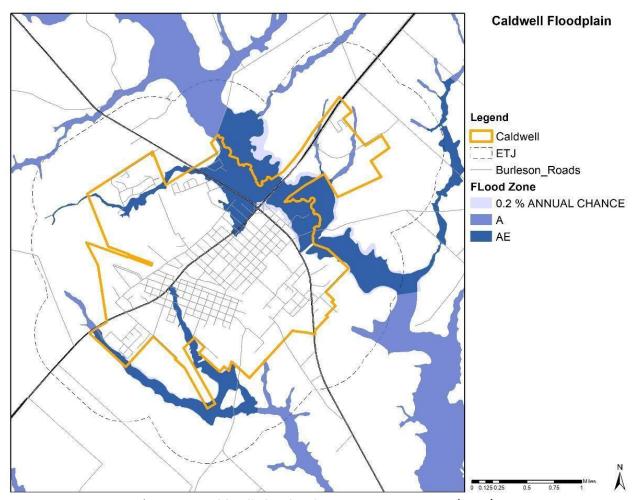


Figure 8.1: Caldwell Flood Risk Areas. Source: FEMA (2020).

Along with Caldwell, the cities of Snook and Somerville participate in the National Flood Insurance Program (NFIP), requiring permits for new construction within floodplains. Other provisions of the NFIP applying to properties within floodplains entail the submission of elevation certifications with permit applications, communicating flood risk to prospective buyers, and efforts to protect open space and waterways.⁷⁷ Currently, Caldwell has 10 policies in place to manage flood risks. Historical information about property damage from flooding is available from the Spatial Hazard Events and Losses Database for the United

⁷⁷Burleson County. (2013). Burleson County Hazard Mitigation Plan. Retrieved from https://co.burleson.tx.us/image/files/Emergency%20Management/Burleson%20County%20Mitigation%20Plan%20APA%202013%20(3).pdf.

States (SHELDUS), which catalogues a total of \$226,000 property damage in Burleson County since 1996.⁷⁸

8.2.2 Severe Wind Events

Caldwell has experienced a total of \$4,580,000 in property damage and \$3,500 crop damage due to wind events since 1995.⁷⁹

8.2.3 Hurricanes

Hurricanes are an intense tropical weather system of strong thunderstorms with surface circulation and wind speed of 74mph or higher. 80 Although Caldwell's inland location protects if from some of the most severe aspects of hurricanes, high winds from category 4 and 5 hurricanes can still threaten the community and provoke other types of hazards such as tornadoes and hail.

8.2.4 Tornadoes

Tornadoes are rapidly moving air columns formed between a cloud and the surface. Speeds can exceed 200 miles per hour, but even lower-speed tornadoes can damage roofs and communication infrastructure. In Caldwell, severe weather and thunderstorms tend to occur during the spring and fall. 19 tornadoes have been recorded in Burleson County since 1950.⁸¹

8.2.5 Hail

Hail is made up of spherical balls of ice and can fall during thunderstorms or intense showers, causing property and crop damage. 46 hailstorms have been recorded in Burleson County since 1950.82

⁷⁸ Arizona State University Center for Emergency Management and Homeland Security. (2020). Spatial Hazard Events and Losses Database for the United States. Retrieved from https://sheldus.asu.edu/SHELDUS/.

⁷⁹ ASU CEMHS (2020). SHELDUS.

⁸⁰ National Ocean and Atmospheric Administration. (2020). Hurricanes. Retrieved from https://www.noaa.gov/education/resource-collections/weather-atmosphere/hurricanes.

⁸¹ ASU CEMHS (2020). SHELDUS.

⁸² ASU CEMHS (2020). SHELDUS.

8.2.6 Thunderstorms

Thunderstorms are a regular occurrence between spring and fall in Caldwell, with September being the month of greatest risk. From 2000 to 2011, Caldwell experienced 14 thunderstorms that caused property or crop damage.⁸³

8.2.7 Wildfire

Wildfires pose a major threat to some parts of central and western Texas. Although the number of annual fire events in the United States has decreased over the last 10 years, fatalities and property damages from fire have increased.⁸⁴ The Texas A&M Wildfire Risk Assessment (WRA) can be used to determine high-risk zones and prioritize emergency response. Maps of historic fire events and wildfire threat are shown below (Figures 8.2 and 8.3).

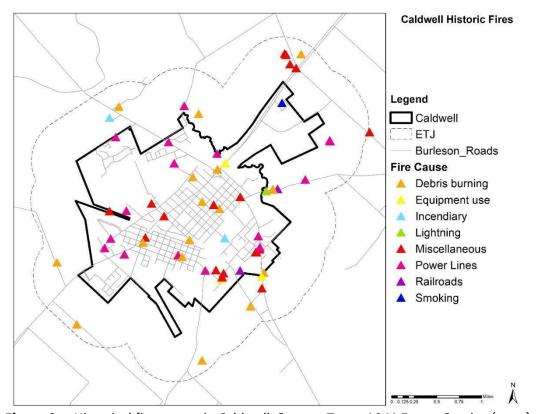


Figure 8.2: Historical fire events in Caldwell. Source: Texas A&M Forest Service (2020)

⁸³ ASU CEMHS (2020). SHELDUS.

⁸⁴U.S. Fire Administration. (2020). U.S. fire statistics. Retrieved from https://www.usfa.fema.gov/data/statistics/

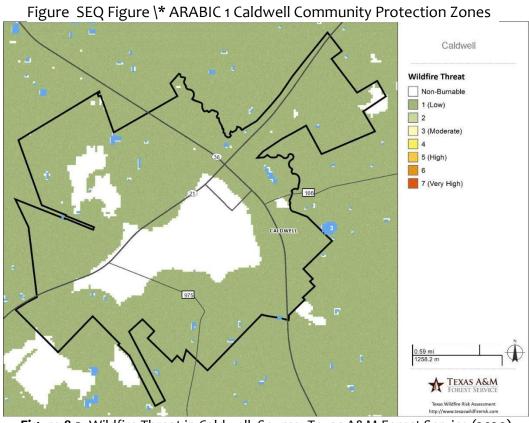


Figure 8.3: Wildfire Threat in Caldwell. Source: Texas A&M Forest Service (2020)

The wildfire threat index, measuring the likelihood of a wildfire occurring in a given area, is derived from landscape characteristics including terrain and surface cover and historical fire and weather data. Values are categorized into seven classes, from low to very high threat. Approximately 80% of Caldwell is rated as low risk, and the rest was classified as not burnable.

A similar measure, Wildfire Ignition Density (WID), estimates the likelihood of a wildfire based on historical patterns and records an ignition rate per year per 1000 acres. Figure 8.4 displays the WID for Caldwell based on data from 2005 to 2009. However, the Southern Wildfire Risk Assessment reports that numerous local data sources were not incorporated due to limited data from the local departments. Since then, new fire reporting incentives were put in place to improve recording of ignition locations. 60.4% of Caldwell was classified as a non-burnable area, while 6.3% of Caldwell had a high likelihood, concentrated on an aluminum extrusion provider.

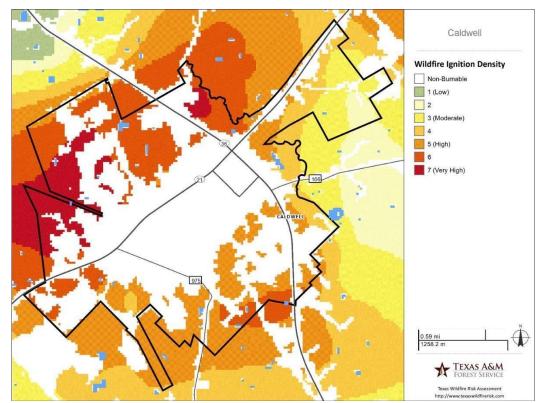


Figure 8.4: Wildfire Ignition Density in Caldwell. Source: Texas A&M Forest Service (2020)

9. Transportation

9.1 Mode Networks

Burleson County's central location within the "Texas Triangle" facilitates connections to major cities and ports across the state. Caldwell is less than half-an-hour's drive from Bryan and College Station, while goods can reach major ports in less than three hours. Figure 9.1 shows the county and its connections to the state rail network and National Highway System (NHS). Note that state-, county-, and locally-maintained roads not forming part of the NHS are not displayed.

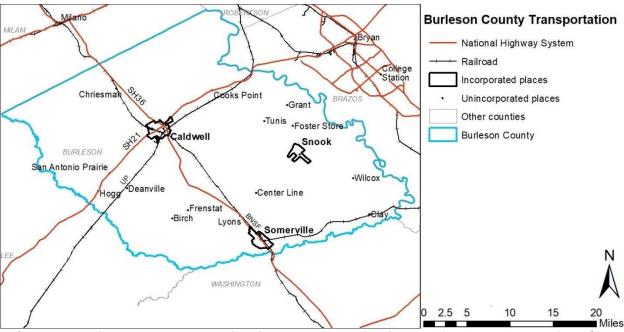


Figure 9.1: Burleson County National Highway System and Rail Network. Source: TxDOT shapefiles (2020)

Caldwell is Burleson County's primary hub for vehicle and rail traffic. Signalized intersections are found along the two state highways, and rail access is provided directly to the Burleson County Co-Op Store downtown, as well as to a sand mining business south of the city (visible in the lower left corner of Figure 9.2). The state highways and railroads are completely grade-separated, with two railroad bridges over State Highway 36 and one over State Highway 21.

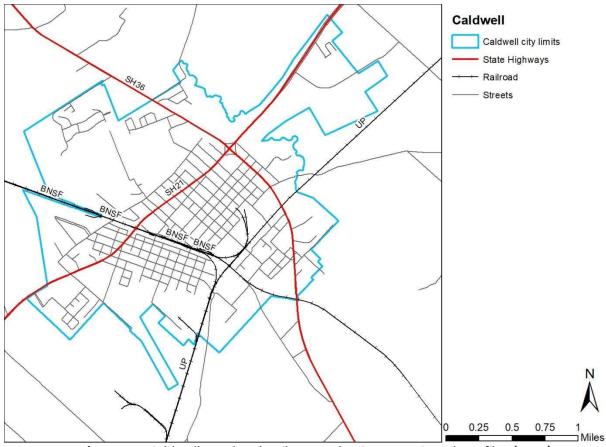


Figure 9.2: Caldwell Road and Rail Networks. Source: BCAD shapefiles (2020)

9.1.1 Highways

Two state highways cross Burleson County, meeting in Caldwell: State Highway 21 and State Highway 36. Both highways are part of the designated National Highway System, a network of roads designated by state and federal transportation agencies to connect locations vital for the country's economic and military capacity. 85 Although no interstate highways pass through Burleson County, the proposed Interstate 14 would likely pass nearby, 16 miles north of Caldwell, along the route of the existing US Highway 190. 86

⁸⁵ Federal Highway Administration. (2017). National Highway System. Retrieved from https://www.fhwa.dot.gov/planning/national_highway_system/.

⁸⁶ Falls, C. (2020, January 3). Bryan/College Station awaits Interstate 14 route options. Retrieved from https://www.kbtx.com/content/news/Bryan-College-Station-awaits-Interstate-14-route-options-566700341.html.

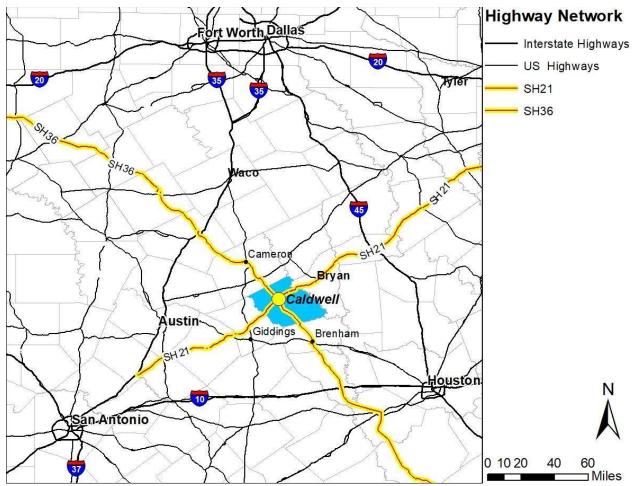


Figure 9.3: State Highway 21 and State Highway 36 routes. Source: TxDOT Shapefiles (2020)

State Highway 21 runs from Interstate 35 in San Marcos to the Louisiana border, connecting Caldwell with Bastrop and Bryan, with Giddings and College Station nearby. Portions of the highway are divided, and the remainder of the route includes passing lanes.

State Highway 36 runs from Freeport to Abilene, connecting Caldwell and Somerville with Brenham and Milano, where it joins US Highway 190 to head towards Temple.

The intersection of the two state highways, on the northern outskirts of Caldwell, includes free flowing right turn lanes from each highway, and a large entrance statement for the city on the south side.

Other important routes within the county include FM 60, serving College Station, and FM 50, passing through Snook, parallel to the Brazos River on the east side of Burleson County.

9.1.2 Railroads

Caldwell sits at the intersection of two main rail lines, a Union Pacific (UP) line running roughly NE-SW and a Burlington Northern Santa Fe (BNSF) line running roughly NW-SE. The Texas UP system primarily serves major cities, with the line running north through Hearne to Fort Worth, Dallas, and Longview, and south through Giddings to Victoria and San Antonio. The BNSF system provides alternative routes to major cities such as Fort Worth and Dallas, and is also the primary network serving the Texas Panhandle (via Cameron and Temple) and smaller cities around East Texas, including Conroe, Cleveland, Beaumont, and Galveston (via Somerville). A direct connection is provided between the UP line from Giddings to the BNSF line towards Cameron. The two main lines are grade-separated, with the BNSF line passing over the UP line. A branch line extends from the BNSF line in Somerville to the UP line in Navasota, visible in the lower right corner of Figure 9.1.

9.1.3 Airports

Burleson County's only airfield is the Caldwell Municipal Airport (FAA airport code RVW), which includes one paved runway in good condition, suitable for general aviation. As of April 2020, 21 aircraft were based at the airport, all but one of them single engine. 70% of traffic was locally based general aviation, with the remainder consisting of general aviation visiting or passing through. Multiple airfields suitable for general aviation are located within 30 miles, including at Hearne, Rockdale, Giddings, and Brenham. Limited commercial services are available at Easterwood Field in College Station, approximately 20 miles away, while extensive international services are available from Austin-Bergstrom International Airport and Houston – George Bush Intercontinental Airport, roughly 75 and 110 miles by road, respectively (all distances are according to Google Maps).

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⁸⁷ Texas Department of Transportation. (2016). State Railroad Map. Retrieved from http://ftp.dot.state.tx.us/pub/txdot-info/tpp/maps/2016-railroad.pdf.

⁸⁸ AirNav. (2020). KRVW – Caldwell Municipal Airport. Retrieved from https://www.airnav.com/airport/KRWV.

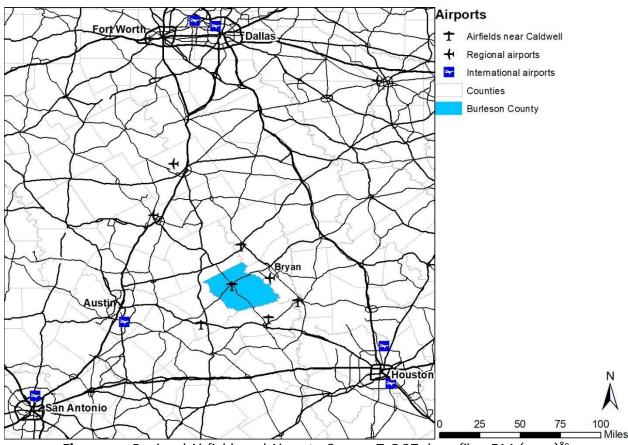


Figure 9.4: Regional Airfields and Airports. Source: TxDOT shapefiles, FAA (2020)89

9.2 Transportation Modes

As in most rural settings throughout the United States, the most common mode of transportation appears to be driving. Burleson County's low population density likely limits the viability of regular public transportation services, which are not currently available within the study area. Although freight rail and bus service passes through the county (Ground Shuttle operates between College Station and Austin-Bergstrom International Airport), Burleson County residents must travel to urban areas like Bryan/College Station or Austin to access long-distance public transportation.

⁸⁹ Federal Aviation Administration. (2019). 2018 Enplanements at All Airports (Primary, Non-primary Commercial Service, and General Aviation) by State and Airport. Retrieved from https://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/media/cy18-allenplanements.pdf.

9.2.1 Mode Share

An estimated 75.9% of Caldwell workers normally commuted to work by driving alone, with 19.1% carpooling. Trends towards most workers driving alone were even more pronounced at the county level, with an estimated 81.1% of Burleson County workers normally driving alone, while 13.3% carpooled. Public transportation was essentially insignificant as a mode, with only 24 residents of Caldwell and Burleson County relying on public transportation as their primary means of travel to work according to 2018 ACS estimates – making transit's mode share just over 1% in Caldwell, and far less at the county level. Although the margin of error for this value is wide, it seems clear that transit plays a minor role in the region, which is perhaps not surprising given the lack of regular fixed-route services. Figure 9.5 shows the relative share of travel by each mode.

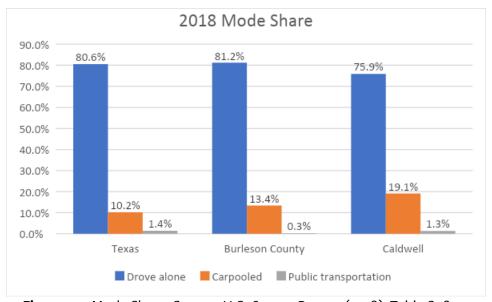


Figure 9.5: Mode Share. Source: U.S. Census Bureau (2018): Table S0802.

A larger proportion of workers in Burleson County and, especially, Caldwell carpool as compared to the state average, perhaps influenced by the lack of regular public transportation services. Carpooling is most popular among the age groups 16-19 and 25 to 44, corresponding to students and the largest cohort of working age. Hispanic residents were, proportionally, the most likely to carpool, followed by non-Hispanic whites. Black

commuters were the most likely to drive alone. 90 Asian American and Native American or American Indian populations were relatively small within the study area, with no clear trends in transportation mode emerging among these populations.

Within Burleson County, median earnings for workers who drove alone to work were over 50% higher than those of workers who carpooled. Almost half of carpoolers in Caldwell reported annual income of less than \$10,000.

9.2.2 Travel Time to Work

Residents of Caldwell have a slightly shorter average commute than Texans as a whole, at around 20 minutes one-way. Almost 35% of workers living in Caldwell travel less than 10 minutes to work, which may suggest room for growth in the use of active modes or micro mobility, such as electric bikes. Burleson County has generally longer commutes (an average of approximately 30 minutes each way), earlier in the morning than the Texas average.⁹¹ Given the number of undivided highways without lighting in the county, this could potentially lead to more accidents.



Figure 9.6: Travel Time to Work. Source: U.S. Census Bureau (2018): Table S0802

⁹⁰ U.S. Census Bureau. (2018). Table S0802. Retrieved from https://data.census.gov/cedsci/table?q=S0802%3A%20MEANS%20OF%20TRANSPORTATION%20TO%20WORK%20 BY%20SELECTED%20CHARACTERISTICS&g=0400000US48_0500000US48051_1600000US4811836&tid=ACSST5_ Y2018.S0802&hidePreview=true&vintage=2018.

⁹¹ U.S. Census Bureau. (2018). Table So802.

9.2.3 Vehicle Ownership

With limited public transportation, owning a reliable vehicle is essential in Caldwell and Burleson County. While households in Burleson County have more vehicles than the state average, households in Caldwell tend to have slightly fewer vehicles. Likewise, according to 2018 ACS estimates, 1.3% of Burleson County households and 3.1% of Caldwell households did not have a vehicle available, compared to 2.1% of Texan households. Notably, 54.4% of Caldwell workers who carpooled and 37.2% of Burleson County carpoolers lived in households with access to three or more vehicles carpooled, which could represent very large households, or vehicles which are available but not reliable.

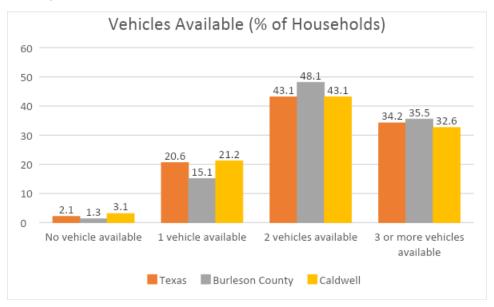


Figure 9.7: Household Vehicles Available. Source: U.S. Census Bureau (2018): Table S0802

9.3 Public Transportation

Burleson County, like all counties within the Brazos Valley Council of Governments (BVCOG) and 10 outside BVCOG, belongs to the Brazos Transit District (BTD). While the nearest regular public transit routes are in the Bryan/College Station area, demand-responsive services are available within Burleson County between 6 a.m. and 6 p.m., Monday to Friday, and between Burleson County and Bryan on Tuesdays and Thursdays. Fares are \$3.50 one way within the county, and \$4.00 one way for destinations in another county.

Transit services are also available, upon registration, with the Brazos Valley Transportation Partnership, arranged through the Burleson Health Resource Center. Residents with disabilities or other accessibility requirements may also use Brazos Valley Center for Independent Living (BVCIL) services.⁹²

9.4 Active Transportation Modes

Currently, the only designated bike route in Burleson County is found in Lake Somerville State Park, connecting the Birch Creek and Nails Creek units. Nevertheless, studies have identified the possibility of a bicycle tourist trail route connecting the Bryan/College Station Area with Austin, Bastrop, and the Lost Pines region, which would likely pass through Burleson County.⁹³

⁹² Brazos Valley Council of Governments. (2019). Transportation Resource Guide. Retrieved from https://bvcog.org/Portals/o/2019%20Transportation%20Resource%20Guide.pdf.

⁹³ Texas Department of Transportation. (2018). Texas Bicycle Tourism Trails Study Final Report. Retrieved from http://ftp.dot.state.tx.us/pub/txdot-info/ptn/btts-final-report.pdf.

10. Community Facilities

10.1 Education

10.1.1 Schools

The Caldwell Independent School District operates five public schools with a total of 1804 students and 132 teachers for the year 2017-2018, serving pre-kindergarten through twelfth grade. The student teacher ratio is 14:1, below the state average of 15:1. The district was rated within the top half of Texas school systems. 94 It earned average math and English proficiency scores of 83% and 72% respectively. The score for math is 5% higher than the state average. The district's accountability rating is "B". The graduation rate of 95% reflects a slight increase over the last five school years. Compared to Texas averages, there is a higher percentage of non-Hispanic White students (at 49%), and a lower percentage of Hispanic students (at 37%).95

Table 10.1 provides a summary of local schools.

Table 10.1: Caldwell Public and Private Schools

Year of data 2017-2018						
Type	School Name	Total students	Total Teachers	Student Teacher Ratio	Grades	Rating
Secondary	Caldwell High School	526	42	13:1	9-12	А
Intermediate	Caldwell Junior High School	413	29	14:1	6-8	В
Primary	Caldwell Intermediate School	417	29	14:1	3-5	D
Primary	Caldwell Elementary School	448	31	14:1	PK-2	C
Other/ Alternative	Caldwell DAEP	N/A	1	N/A	6-9	N/A
Private school						
Primary and Secondary	First Baptist School	164	9	18:01	PK-8	N/A

⁹⁴ Public School Review. (2020). *Caldwell, Texas*. Retrieved from:

https://www.publicschoolreview.com/texas/caldwell-independent-school-district/4812460-school-district

⁹⁵ Public School Review. (2020).

Source: Texas Education Agency (2020)

Caldwell is served by one private school, First Baptist School, offering pre-kindergarten through eighth grade.

10.1.2 Childcare

Three licensed daycare centers operate in Caldwell, serving infants to school-age children. Tender Loving Care and Abundantly Blessed Childcare participate in subsidized childcare programs, while Little Farm Learning Center does not. Each can accommodate 40 to 50 children. 96

10.2 Healthcare

Caldwell has 10 healthcare centers which include medical clinics, mental health facilities, and the Burleson St Joseph nursing homes. The main healthcare provider for Burleson County is CHI St. Joseph Health Burleson hospital, located on the west side of Caldwell. The hospital provides 25 beds and in- and outpatient care across a variety of disciplines, including podiatry, nephrology, gynecology, and cardiology.⁹⁷

10.3 Public Administration

10.3.1 Police

Unincorporated areas of the county are served by the Burleson County Sheriff's Office, while Caldwell and Somerville have their own police forces. Caldwell Police Department employs 10 officers. 98 Somerville Police Department employs 5 officers, with the police chief recently noting that low salaries dissuaded many applicants from joining the force. 99

⁹⁶ Child Care Center US. (2020). *Caldwell, Texas Child Care Centers.* Retrieved from: https://childcarecenter.us/provider_detail/abundantly_blessed_child_care_center_caldwell_tx

⁹⁷ CHI St. Joseph Health Burleson hospital. (n.d.). CHI St. Joseph Health Burleson hospital. Retrieved from https://www.chistjoseph.org/services

⁹⁸ Policeone. (2020). Caldwell Police Department. Retrieved from policeone.com: https://www.policeone.com/law-enforcement-directory/police-departments/caldwell-police-department-caldwell-tx-UIFHQbbxqgEyWQ5M/

⁹⁹ White, G. (2020, June 9). Somerville PD won't hire ex-HCSO deputy once charged with John Hernandez's murder. *KHOU-11*. Retrieved from https://www.khou.com/article/news/local/chauna-thomson-will-not-be-hired-by-somerville-police-department/285-879e0169-513d-4ado-80fc-9c5ad2ae441e.

Overall crime is much lower than the national average in Caldwell, although the murder rate is somewhat higher than average.¹⁰⁰

10.3.2 Fire

All fire services in Burleson County operate on a volunteer basis, with the Burleson County and Caldwell Fire Departments located within the city of Caldwell. Other fire stations are located at Cooks Point (about 15 minutes northeast of Caldwell), Cade Lake (about 15 minutes west of Caldwell), Somerville, Snook, Deanville, Black Jack, and Birch Creek. The Caldwell Fire and Rescue Station has a capacity of 23 volunteer firefighters, while the Somerville fire station has a capacity of 29, 102 and the Snook fire station a capacity of 15.103

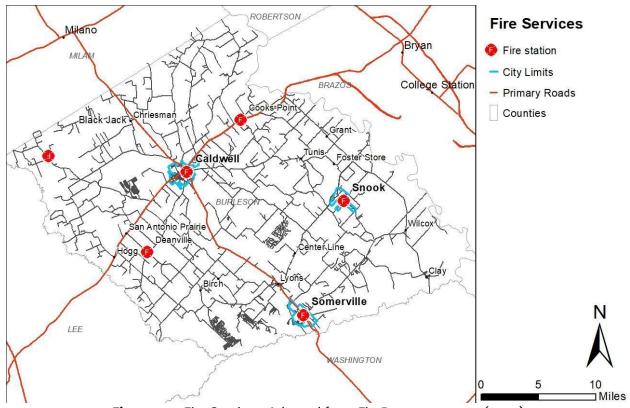


Figure 10.1: Fire Services. Adapted from FireDepartment.net (2020)

¹⁰⁰ Esri (2020). Crime Summary – Caldwell City, TX.

¹⁰¹ FireDepartment.net. (n.d.). *Caldwell Fire and Rescue Fire Fighters*. Retrieved from: https://www.firedepartment.net/directory/texas/burleson-county/caldwell/caldwell-fire-and-rescue

¹⁰² FireDepartment.net. (2015). Somerville Volunteer Fire Department. Retrieved from https://www.firedepartment.net/directory/texas/burleson-county/somerville/somerville-volunteer-firedepartment.

¹⁰³ FireDepartment.net. (2015). Snook Volunteer Fire Department. Retrieved from https://www.firedepartment.net/directory/texas/burleson-county/snook/snook-volunteer-fire-department.

10.3.3 Other Government Infrastructure

The Burleson County Courthouse is located in the center of Caldwell and hosts the county government. Caldwell City Hall is located one block away. The Burleson County Appraisal District is also located in downtown Caldwell, while the Caldwell Municipal Courts and Police Department are located in the industrial park on the west side of the city.

10.4 Utilities

Caldwell, Somerville, and Snook provide electricity, sanitation, and water and wastewater services. Additionally, one municipal utility district (MUD), 10 water supply corporations, and 7 additional water service associations serve rural settlements.¹⁰⁴ The city of Caldwell and the Deanville Water Supply Corporation are the largest providers, serving approximately 4,000 and 3,000 users, respectively.¹⁰⁵ Caldwell's municipal water exceeded federal standards, although the Environmental Working Group reported concentrations of 11 contaminants exceeding their guidelines.¹⁰⁶

Overall, despite continuing population growth, Burleson County's own water needs are projected to peak in 2030 and gradually decline after that decade, from 2,898 acre-feet per year in 2020 to 3,376 in 2070. Irrigation and mining demand are expected to fall significantly over the next fifty years, while livestock water demand is projected to be stagnant. The only major increase in the county's own use projection comes from a significant increase in manufacturing water demand, particularly between 2020 and 2040.¹⁰⁷

¹⁰⁴ Public Utility Commission of Texas. (2020). Water Utility Information. Retrieved from http://puc.texas.gov/WaterSearch/Search/Find?CountyId=26&Page=1&PageSize=25.

¹⁰⁵ Environmental Working Group. (2020). Tap Water Database – Burleson County, Texas. Retrieved from https://www.ewg.org/tapwater/search-results.php?fips=48051&searchtype=county.

¹⁰⁶ Environmental Working Group. (2020). Tap Water Database – City of Caldwell. Retrieved from https://www.ewg.org/tapwater/system.php?pws=TX0260001.

¹⁰⁷ TWDB. (2017). 2017 Texas State Water Plan: Burleson County. Retrieved from https://2017.texasstatewaterplan.org/county/Burleson.

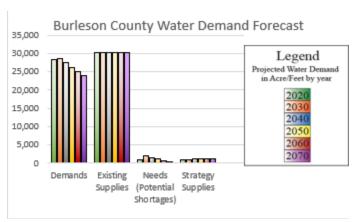


Figure 1.4 – Burleson County Water Demand Forecast – 2020 – 2070. Source: TWDB (2017)

Municipal water demand is projected to rise slightly over the 50-year forecast period, The county's own use is completely sustainable with existing water levels in the Carrizo aquifer beneath Burleson County. The aquifer becomes brackish and salty west of Lee County, meaning that I-35 Corridor Counties to the west do not have steady supplies of freshwater for the future despite some of the fastest population growth in the country. Several proposals to allow outside counties to build their own infrastructure in the region to transport water away from Burleson County are being considered. Bexar County, home of San Antonio, and Williamson County, home of Round Rock and Georgetown, are experiencing significantly faster growth and are seeking additional freshwater reserves to sustain that growth. Water began flowing from the local Carrizo aquifer to San Antonio in April 2020 despite concerns on both sides – namely, among San Antonio customers unhappy with the high costs of the project, and scientists and Burleson County locals concerned about potentially unsustainable aquifer drawdowns to supply San Antonio's housing growth and attract industry. The Post Oak Savannah Groundwater Conservation District will assess local water levels, and can cut San Antonio's share if necessary.

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¹⁰⁸ Huddleston, S. (2020, May 11). Like it or not, Vista Ridge pipeline now delivering water to San Antonio. *San Antonio Express-News*. Retrieved from https://www.expressnews.com/news/local/article/Like-it-or-not-Vista-Ridge-pipeline-now-15260352.php.

10.5 Public Amenities

10.5.1 Parks

The City of Caldwell manages a number of parks and recreation areas, covering 1.5% of the city's area. ¹⁰⁹ The largest park, Davidson Creek Park, has amenities such as a splash pad, slide, baseball field, basketball court, horseshoe pit, volleyball court, soccer field, lake, picnic tables, fishing, swings, and walking trails.



Figure 10.1: Davidson Creek Park. Top left photo source: City of Caldwell, Texas (2020)

Table 10.2: Caldwell Municipal Parks

Park Name	Area, Acres		
Freeman Street Park	0.75		
Davidson Creek Park	35.32		
Santa Fe Park	1.26		

Source: Texas Parks & Wildlife (2012)

¹⁰⁹ Texas Parks and Wildlife. (2012). LWRCP-Statewide Inventory 2012. Retrieved from: https://tpwd.texas.gov/gis/apps/lwrcrp/

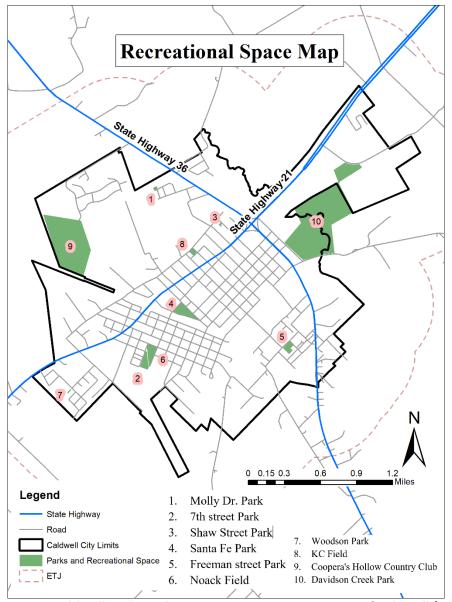


Figure 10.2: Caldwell Parks and Recreation Areas. Source: City of Caldwell (2020)

10.5.2 Library

Caldwell's public Harrie P. Woodson Memorial Library began as the "Women's Club Library" in 1916, which was given to the City of Caldwell in 1940. Later, the library was named after the Woodson family as acknowledgement of their help expanding its collection. The library lends books and movies as well as offering fax, scanning, photocopying, and genealogy services. It sponsors storytelling and summer reading programs for children and

¹¹⁰ Harrie P. Woodson Memorial Library. (n.d.) Retrieved from https://caldwell.ploud.net/.

teenagers, along with book clubs and a series of talks aimed at preparing high schoolers for adult life. Other talks addressed topics like culture, diversity, arts, health and fitness and community involvement.¹¹¹



Figure 10.3: Harrie P. Woodson Memorial Library. Source: Harrie P. Woodson Memorial Library (n.d.) 10.5.3 Museums

The City of Caldwell has three museums showcasing the city's history. The Caldwell Historical Museum is open 7 days a week and located in the Civic Center. The Czech Heritage Museum focuses on the lifestyle of local Czech settlers in the late 19th and early 20th century. Another historical place of interest is the Kraitchar house, built in 1891.¹¹²

¹¹¹ Harrie P. Woodson Memorial Library. (n.d.)

¹¹² City of Caldwell. (2020). *Museums*. Retrieved from City of Caldwell, Texas: https://www.caldwelltx.gov/museums/.

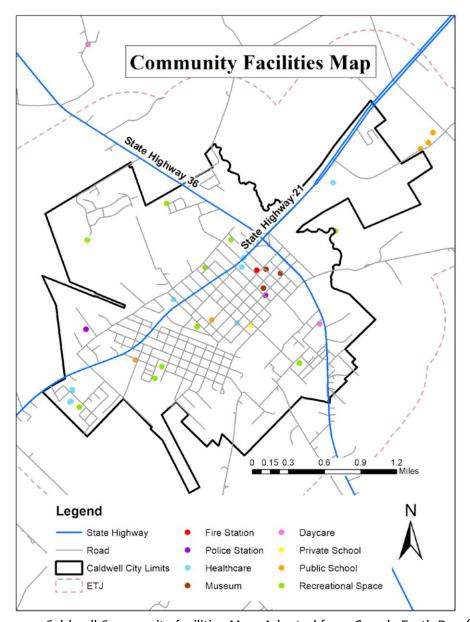


Figure 10.4: Caldwell Community facilities Map. Adapted from Google Earth Pro. (n.d.)

10.6 Community initiatives and organizations:

10.6.1 Voices for Children - Court Appointed Special Advocate (CASA) of Brazos Valley

The CASA program was first established in 1977 in Seattle, Washington by a judge who found that the welfare of children in state custody was often overlooked by overworked state social workers. To ensure each child or set of children received undivided attention, community volunteers were recruited to represent each case. The program was soon

extended nationwide. Voices for Children, serving the Brazos Valley, was founded in 2000 and reached Burleson County in 2009. 113

10.6.2 Hospice Brazos Valley

Hospice Brazos Valley is a non-profit organization that provides hospice care across 17 Texas counties. It was founded in 1989 and participates in the independent, nationwide Community Health Accreditation Program (CHAP). 114 Care from nurses, aides, social workers, and physicians is available through home visits or at an inpatient facility in Bryan. The organization is funded by donations and sales from stores in Brenham and Bryan.

10.6.3 Bluebonnet Area Crime Stoppers

Founded in 1998, the Burleson County Crime Stoppers became Bluebonnet Area Crime Stoppers with expansion to two additional counties. The service accepts anonymous tips by phone or online, and pays rewards to tipsters. ¹¹⁵

10.6.4 Burleson County Wildlife Association

As mentioned in section 7.8, the Burleson County Wildlife Association is dedicated to environmental education, preserving wetlands and wildlife habitat, and managing hunting and the feral hog population.¹¹⁶

10.6.5 Other Initiatives

Two international service organizations are present in Caldwell – namely, the Lions Club and Rotary Club. The law enforcement service organization Cops for Kids is a charitable foundation that runs fundraising events to benefit vulnerable children by providing school

http://bluebonnet.crimestoppersweb.com/sitemenu.aspx?ID=363&

¹¹³ Voices for Children – CASA of Brazos Valley. (n.d.) Retrieved from http://vfcbrazos.org/.

¹¹⁴ Hospice Brazos Valley. (n.d.). Retrieved from https://www.hospicebrazosvalley.org/.

¹¹⁵ Bluebonnet Area Crime Stoppers. (2020). Retrieved from:

¹¹⁶ Burleson County Wildlife Association. (n.d.) Retrieved from: https://www.burlesoncountywildlife.org/.

supplies, meals for families who are struggling to provide meals at school and school clothes. Elizabeth Lutheran Church in Caldwell hosts a food pantry once a month.¹¹⁷

¹¹⁷ Elizabeth Lutheran Church. (2020). Serving Opportunities. Retrieved from https://elizabeth-lutheran.org/serving-opportunities/.