

**2017**

**STAR VALLEY ECONOMIC**

**AND**

**DEMOGRAPHIC REVIEW**







**2017**

## **Authors Summary**

The Star Valley economic picture is optimistic. Star Valley is experiencing growing population, unemployment is reaching toward historic lows at 3.3%, liquidity within the market is expanding, local inflation is low, jobs are available, and real estate prices are increasing. Overall, these factors come together to indicate a robust and promising local economy.

However, there are also significant long-term issues developing. These challenges are macro issues largely originating outside the Star Valley economy. The State of Wyoming is feeling the negative impacts of ongoing structural changes in the energy market and has seen reduced, but stabilizing, severance based state income. Many Wyoming communities have been hit harder by the current relatively lower energy prices in comparison to Star Valley. However, Star Valley governments and schools, a large employment sector, are very dependent on general state revenues. The Wyoming state revenue stream, dependent heavily on mineral activity, is directly correlated to local and county governmental jobs. Government, which has been the largest growing sector in recent years, may see a reduction in size as revenues decline.

The Federal Reserve has taken actions to raise interest rates, with four 0.25% increases in the Fed Funds rate beginning December 2015. Further, the Federal Reserve is now providing guidance that it will begin to slowly reduce their \$4.5 billion balance sheet, which was expanded by \$3.5 billion to deal with the impacts of the Great Recession. Today, the U.S. economy is showing sustained but relatively low marginal growth at 2.1% for 1<sup>st</sup> quarter 2017. In fact the annual GDP growth rate has been 2.1% since the end of the last recession. The U.S. is now in its 98<sup>th</sup> month of recovery, making this the third longest growth cycle since 1850. In short, the time to the next recession is unquestionably growing shorter. For 2017, the US recession probability, which is calculated from a dynamic-factor Markov switching model, has grown from 0.05% at the beginning of the year to 0.44% as of May 2017.

While not as many large commercial projects are currently underway as in 2015 – 2016, there are a few commercial construction projects with a new farm outlet store in Afton and a new lumberyard in Etna, and the expansion of the grocery store in Thayne. While there have been some new business additions, others have announced reductions such as Alliance Title and Wells Fargo closing their Afton branch.



The residential housing market continues to be strong as measured by the number of new housing starts and housing prices. With increasing residential housing prices, a full 17% annualized increase in the first half of 2017, the authors are increasingly concerned that the residential market may be migrating into a potential “excessive exuberance” stage and overheating. While housing prices are increasing and listing periods are shortening, the residential market, to date, has not experienced the speculative aspect seen in the 2000 to 2007 period. Most homes are being built or sold for owner-occupied purposes, not for rental or speculative objectives. This observation, if true, may indicate that Star Valley is developing an emerging affordable housing issue that’s partially due to years of limited new-home construction and is compounded by limited supply of affordable housing for an area with increasing population and moderate household income.

Star Valley continues to see changes in its population demographics and economic base – with an economic transformation that began when the old agriculture economy moved toward mining/manufacturing, and is now increasing based on tourism and retirement services. At the same time, the Star Valley economic ties continue to grow closer to the Jackson economy with an ever-larger part of the work force employed in Teton County. Due to the cost of living in Teton County, the merging of the two areas economies will continue as more of the area labor force lives in Star Valley. At the same time, Star Valley is realizing a substantial increase in the number of its own affluent residents. These changes will bring increased opportunity as well as increased income inequality – an issue that is relatively new to Star Valley.

Change is inevitable, and this great valley is not immune. The beauty, good people, favorable economic conditions, and small-town American feel of Star Valley almost guarantee continuing opportunity and a bright future – it is just going to get a little more crowded with each passing year.



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## **SPECIAL THANKS**

In order to gain a more complete picture of the economic condition of Star Valley, the Bank of Star Valley relies on many individuals, businesses, and government entities to provide information and data. The Bank wants to express gratitude to those who helped provide the information and data and thank them for their time, assistance, and patience.

Lincoln County School District #2

Thayne Senior Center

Salt River Senior Center

1<sup>st</sup> Bank

Aviat Aircraft

Freedom Arms

J.R. Simplot

Lincoln County Government

Lower Valley Energy

Silver Star Communications

Polyguard & RMP Mobile

Wells Fargo

PC Industries

Star Valley Medical Center

Star Valley Independent

Lincoln County Assessor

Lincoln County Planning and Zoning

Town of Afton

Town of Alpine

Town of Thayne

Town of Alpine

Town of Star Valley Ranch

Jackson Hole Real Estate Associates

Local Landlords

Big Country Realty

Advantage Realty

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This analysis was a collaborative effort by Lorenzo Merino, Intern/Special Projects Assistant, Marcus Weber, Bank of Star Valley Vice President, and Rod Jensen, Bank of Star Valley President

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# 2017 STAR VALLEY ECONOMIC and DEMOGRAPHIC REVIEW

## INTRODUCTION

The following is The Bank of Star Valley's 2017 demographic and economic review of its market area, being Star Valley, Wyoming, and Idaho. More specifically, The Bank of Star Valley serves the northern half of Lincoln County, Wyoming, and the Star Valley areas of Caribou and Bonneville Idaho Counties. This report reviews Star Valley demographic dynamics, employment, income levels, cost-of-living considerations, national and state economic trends, as well as real estate trends.

The Bank shares this report with individuals and businesses by posting the report on the Bank's website, [www.bosv.com](http://www.bosv.com). However, readers should exercise care in relying upon the findings of this report, as they may reflect biases and potential misinterpretation of the data by the authors. A regional economic study, due to the complexity of the subject and its infinite scenarios, is by its very nature limited in scope.

## POPULATION

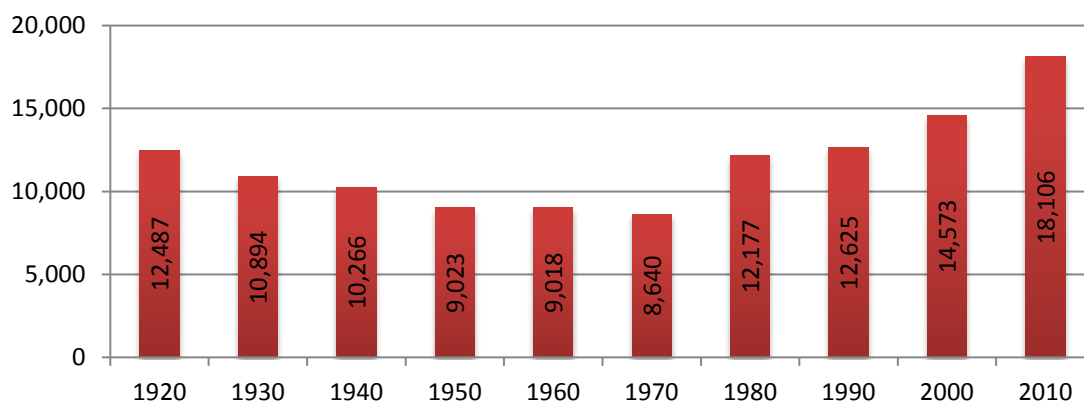
According to U.S. Census Bureau data, the population of Lincoln County, Wyoming, has been growing steadily since 1970. Prior to 1970, the Lincoln County population was showing a declining trend. The last census, performed in 2010, counted 18,106 people who reside within Lincoln County. In comparison to 2000's census 14,573 headcount, that constitutes a 24.20% increase, or an additional 3,533 people. The period of 2000 to 2010 was a period of rapid growth for Lincoln County, with an average annual growth rate of 2.42% -- with a large share of the growth realized in the northern, Star Valley, part of the county.

Population growth directly impacts, and is positively correlated to, the general economic vitality of a community. Economic growth is enabled by corresponding increases in human capital, aggregate community wealth, aggregate income, spending power, and the increased demand for goods and services. The higher demand for goods and services tends to increase the

demand for labor resulting in the creation of jobs, which again, potentially encourages population growth. On the other hand, population stagnation or reduction has the opposite effect on economic growth.

The U.S. Census population count for Lincoln County, Wyoming, for the period of 1920 to 2010 is shown below. It is interesting that it took 70 years for the Lincoln County population to match that of the 1920 census. It was around 1970 when the structural change in the Star Valley economy began with the slow but steady transition from an agricultural – dairy and beef driven economy to a more residential, consumer based community. This structural transition began with the creation of Star Valley Ranch and other housing developments. Also, the change in population is strongly associated with the emergence and growth of the Jackson Hole tourism market and Star Valley’s continuing evolution into a bedroom community to Jackson, Wyoming. Star Valley is now seeing increased population growth, including recently some very affluent individuals. People are choosing to move to the area, drawn by its amenities, including scenic beauty, perceived security, high quality educational and medical sectors, and other quality of life considerations.

## Lincoln County Population by U.S. Census Count



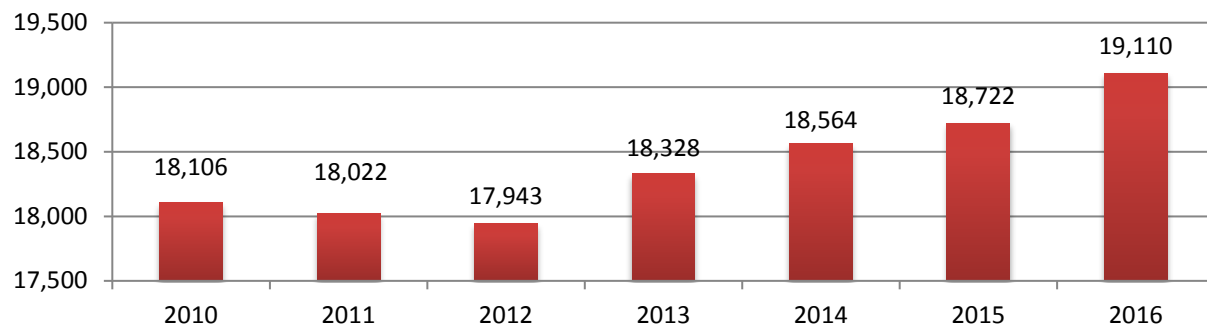
Source: State of Wyoming Department of Administration and Information Economic Analysis Division

The population of Lincoln County is continuing to grow. The Wyoming Economic Analysis Division (EAD) has estimated a population increase of 388 people, or a 2.1% population increase, in Lincoln County from 2015 to 2016. According to EAD estimates, 1,004 additional people call Lincoln County home since the 2010 census. This constitutes a 5.54% increase over the six-year period of 2010 to 2016.

While Lincoln County's population has grown by about 2.0% year-over-year, Wyoming's population has recently realized a slight decrease of -0.2%. Wyoming has been adversely impacted by the turmoil in the energy markets and resulting low prices. The north-western area of Wyoming (Star Valley, Jackson, Yellowstone and Cody area) is much less dependent on the energy sector for local economic activity than the rest of the state.

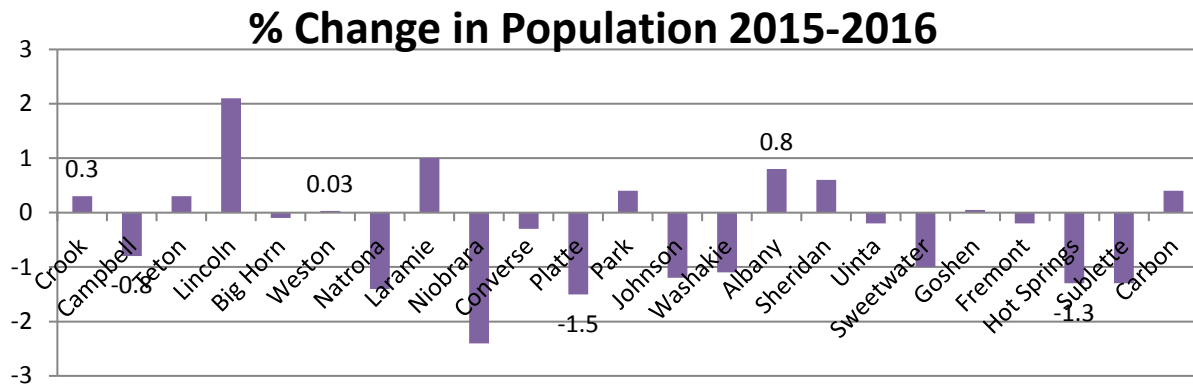
EAD estimated that Lincoln County's population declined from 2010 to 2012, following the Great Recession of 2008. The Great Recession hit the real estate market in Star Valley very hard with an estimated 30.0% real estate market value decline. However, EAD has since estimated that the area population began to grow again around 2013, and the rate of growth has been accelerating in recent years. The graph below depicts EAD's estimations from 2010 to 2016 for Lincoln County.

### Lincoln County Population



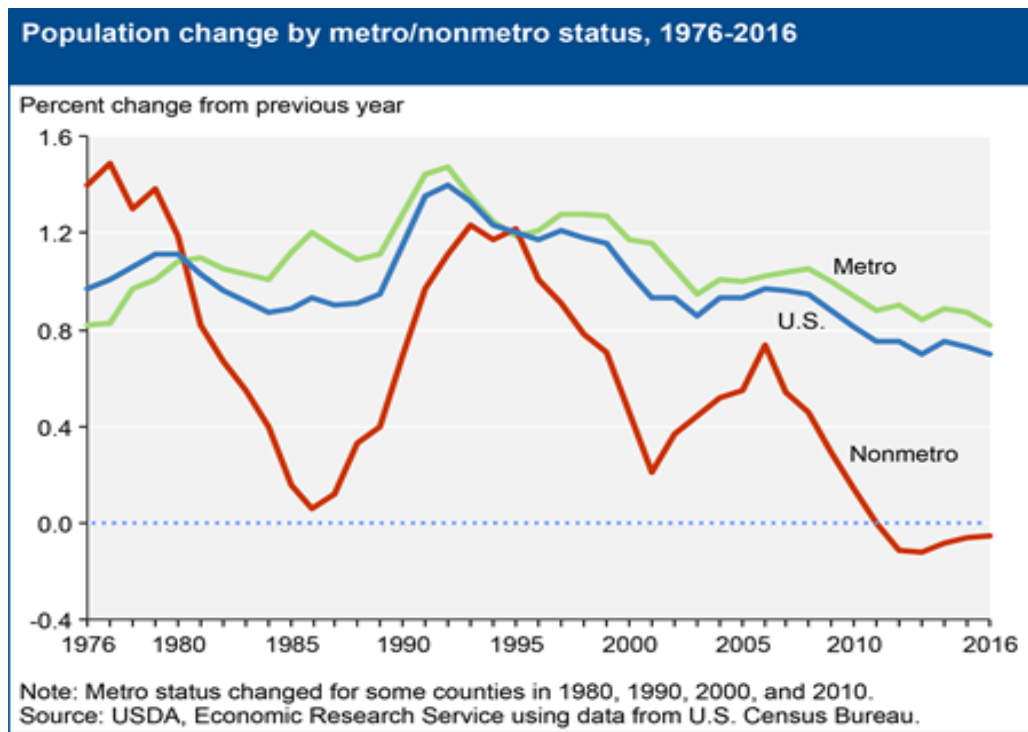
Source: State of Wyoming Department of Administration and Information Economic Analysis Division

Slow or negative population growth is a recent and growing social and economic issue for the majority of Wyoming counties. Unfortunately, the majority of Wyoming's counties experienced a negative growth rate with Niobrara County being impacted the heaviest. Although it only lost 62 people in total, due to the beginning smaller population, its rate of decline was large. Conversely, Lincoln County is the only county that had over a 2.0% population increase. Compared to all other Wyoming counties, this is a very large increase. Following Lincoln County is Laramie County with a 1.0% increase and close behind is Albany County with a 0.8% increase.



Source: State of Wyoming Department of Administration and Information Economic Analysis Division

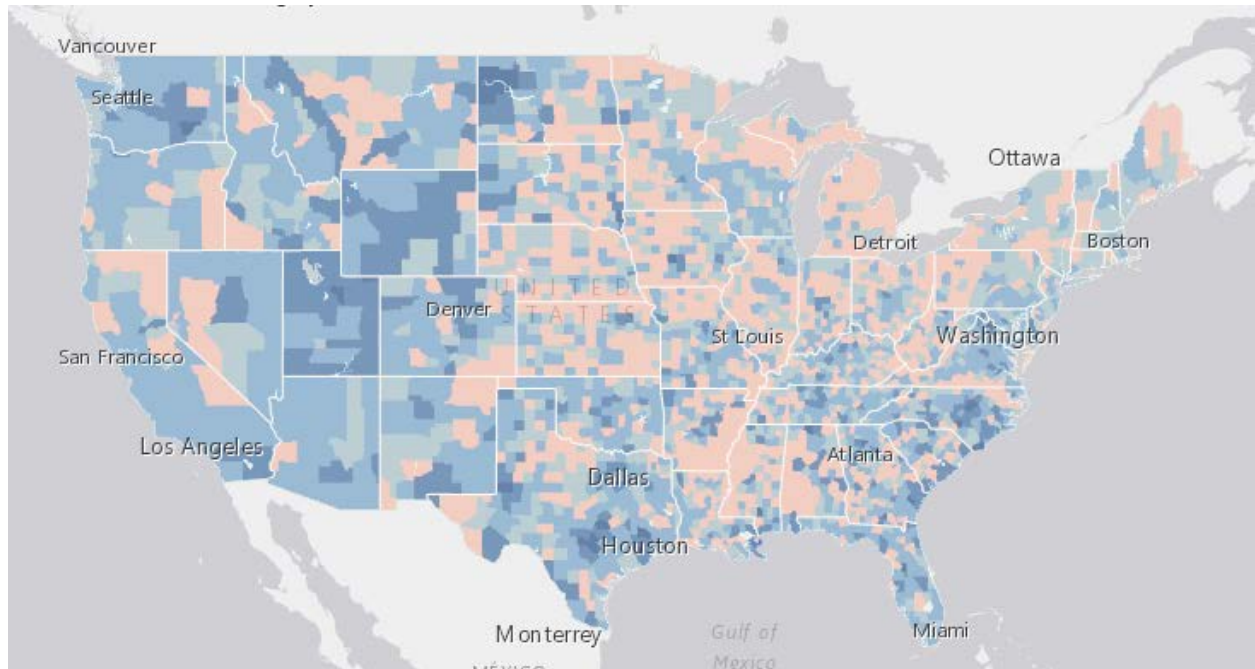
The thirteen Wyoming rural counties with declining population are following an ongoing national trend of rural area population decline. The graph below, from the U.S. Census Bureau, shows the declining U.S. rural county population trend.



Source: United States Census Bureau

This is worrisome for rural counties in general as population decline generally precedes economic stagnation, and Lincoln County is a rural county. While Lincoln County population growth is showing a positive trend, the concern remains that this trend may adversely adjust with time and begins to mirror the national trend.

The following graphic of the continental U.S., provided by ArcGIS.com, illustrates the negative growth rate of most rural counties. The redder color denotes '0% or negative' growth. Much of the U.S. rural heartland is experiencing a loss of population as younger people move to more urban areas to pursue educational, social, and employment opportunities which are lacking in the rural areas. This is leaving a decreasing and aging rural population base. This results in loss of employment, closing of small businesses, and a negative long-term economic outlook for these rural counties.



#### Legend

#### USA Projected Population Growth Rate 2010-2015

#### 2012-2017 Annual Population Growth Rate

#### Counties

- 2.6% or more
- 1.3% to 2.5%
- 0.4% to 1.2% (US Avg: 0.68%)
- 0.1% to 0.3%
- 0% or negative
- No population

Source: ArcGIS.com

The areas which are showing growth are predominately the West Coast, East Coast, and the Rocky Mountain regions. Wyoming, being part of the Rocky Mountain region, potentially has a brighter demographic future than its neighboring states to the east. It had a period of population growth over the last 10 years, up to this recent year. However, this trend may be

reversing for many of the mineral extraction dependent Wyoming counties, due to currently low energy prices and the U.S. energy sectors movement away from coal for electrical generation. There is little doubt that with the falling coal demand and prices, Campbell County will not be a growth leader in the next data set.

It is interesting that both Bear Lake and Caribou, Idaho, Counties, which lie on the western Lincoln County, Wyoming border, are experiencing low to negative population growth according to the graphic above.

Transitioning over the last 10 years, there is another structural change currently taking place in Star Valley, and that is affluent people choosing to invest in Star Valley, and making it their home. Before 10 years ago, much of this type of growth took place in the Jackson market, not Star Valley. However, with the low tax rate, natural amenities including three national forests, fisheries, and strong infrastructure, these affluent individuals are purchasing housing and investing in property within the Valley. The result has been the creation of communities within Star Valley which are unique, fairly exclusive, and provide the basis for more of these people to move here.

For example, Star Valley has the Double L Ranch and Alpine and Afton Airparks just to reference a few. In addition, large areas of the Valley have been purchased by affluent individuals with extensive work done to enhance housing as well as fisheries and wildlife habitat on these



parcels. These properties, and quality of life, have been featured several times in Wyoming Lifestyle magazine and was also featured in the national publication, Aircraft Owners and Pilots Association magazine in a feature article entitled “Living a Western Life, The Uncommon Beauty of Wyoming’s Alpine Airpark” (June 2016).

Due to the uniqueness of Star Valley, the growing congestion of Jackson, and Wyoming's accommodative individual and corporate tax rate, these upper-end developments are growing, attracting successful and talented individuals to Star Valley and adding exponentially to the human capital resources of the area. Further, this growth creates new demand for goods and services, corresponding to enhanced employment opportunities and the general overall long-term economic growth of the Valley.

## **Star Valley Wyoming Population Estimate**

The Bank created a population model in 1996, and it has proven so far to be remarkably accurate. The model was originally developed to forecast the Star Valley population based on the 2000 census and used for the chartering of the Bank. The Bank continues to use this model to estimate the current as well as the future Star Valley population to 2030, now using the 2010 census as the base.

One metric used in past reviews has been to use Wyoming's growth rate as a scenario to represent the growth rate in Star Valley, but since Wyoming's recent growth was negative, the authors felt that the probability of this happening in Star Valley in the current environment was very low. Therefore, Wyoming's growth rate as a factor was not used in this year's model.

The authors utilized four scenarios to predict Star Valley's future population growth, and are:

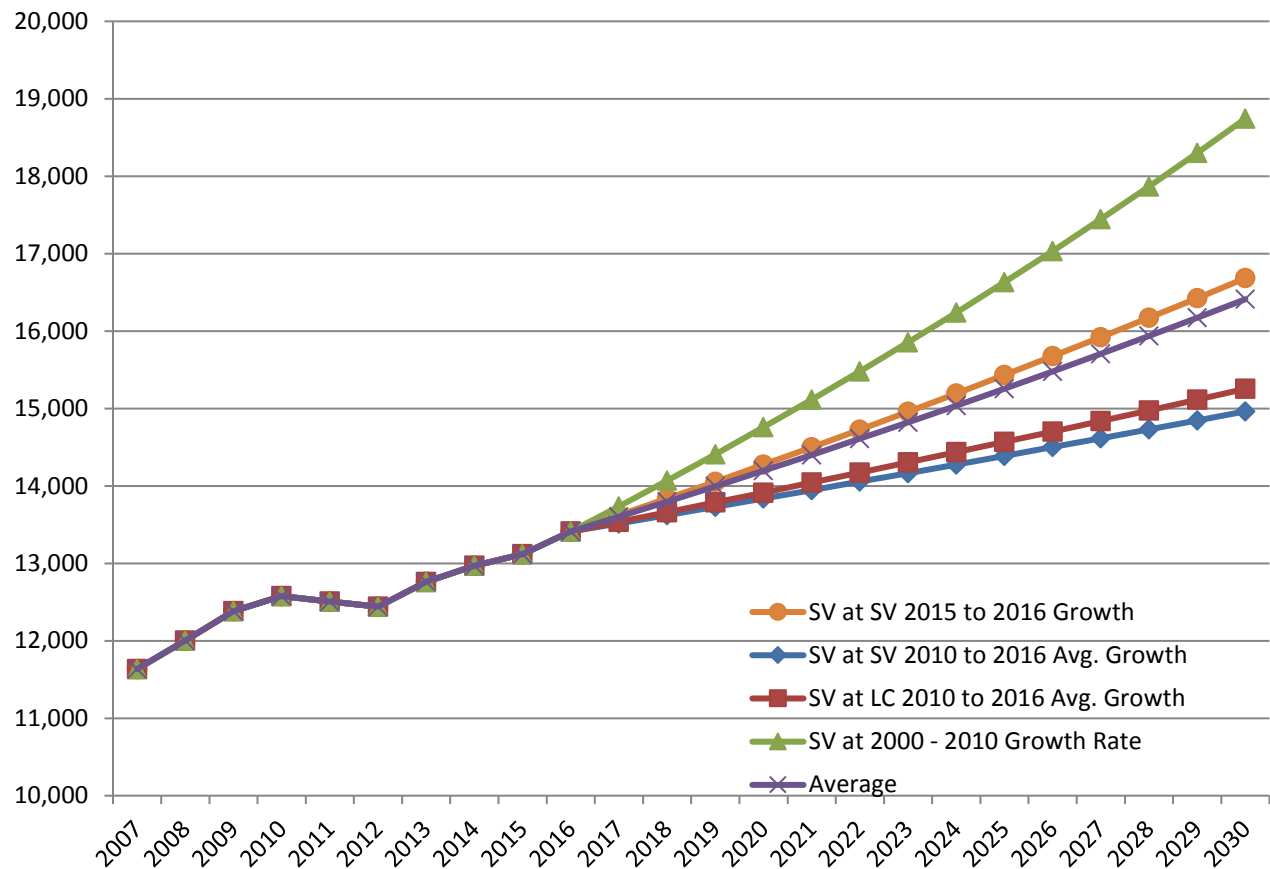
- Star Valley population growth at the same rate as it realized between the recent years of 2015 to 2016, which was 1.57%.
- Star Valley population average annual growth at the same rate realized between the period of 2010 to 2016, which was 0.79% (low-end-constraint).
- Star Valley population growth at the 2010 to 2016 annual Lincoln County growth rate adjusted for the higher growth rate realized in Northern Lincoln County – resulting in an estimated growth rate of 0.92%.
- Star Valley population growth at the average annual rate the area experienced from 2000 to 2010, which was 2.42% (high-end constraint).

The Bank's model results are shown below. It estimated that Star Valley's population as of year-end 2016 was approximately 13,400 – or 70% of the total population of Lincoln County. As for potential population growth, the high growth rate scenario indicates that in 2020, the Star Valley population may be as high as 14,700 individuals, and the low growth rate scenario forecasts a population of at least 13,800 individuals for 2020. The authors utilized an average of the four growth scenarios to represent a preferred indicator for the highest probability for future population. Based upon this assumption, it is estimated that Star Valley's population will approximately be 14,000 in 2020 and will continue to grow, reaching approximately 16,000 in

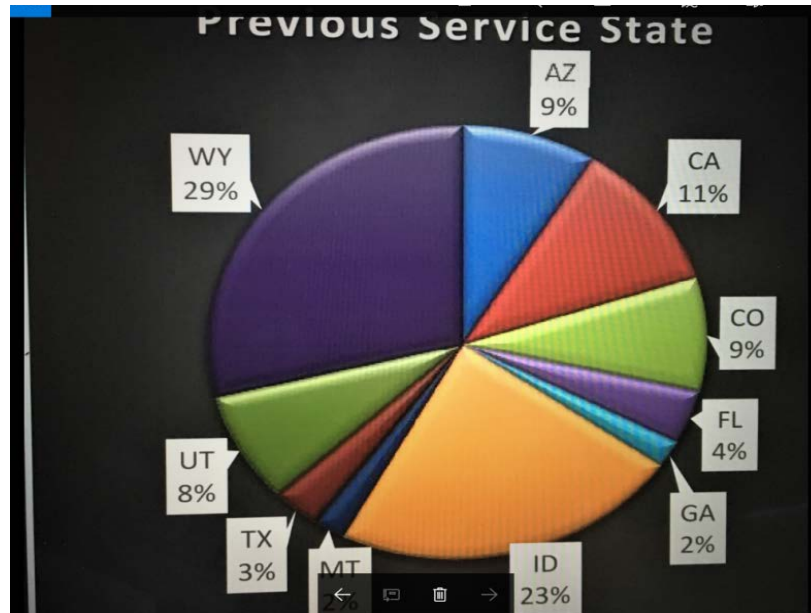


2030. Bottom line, it is clearly going to continue to get more and more crowded in this small valley.

## Star Valley Population Projection



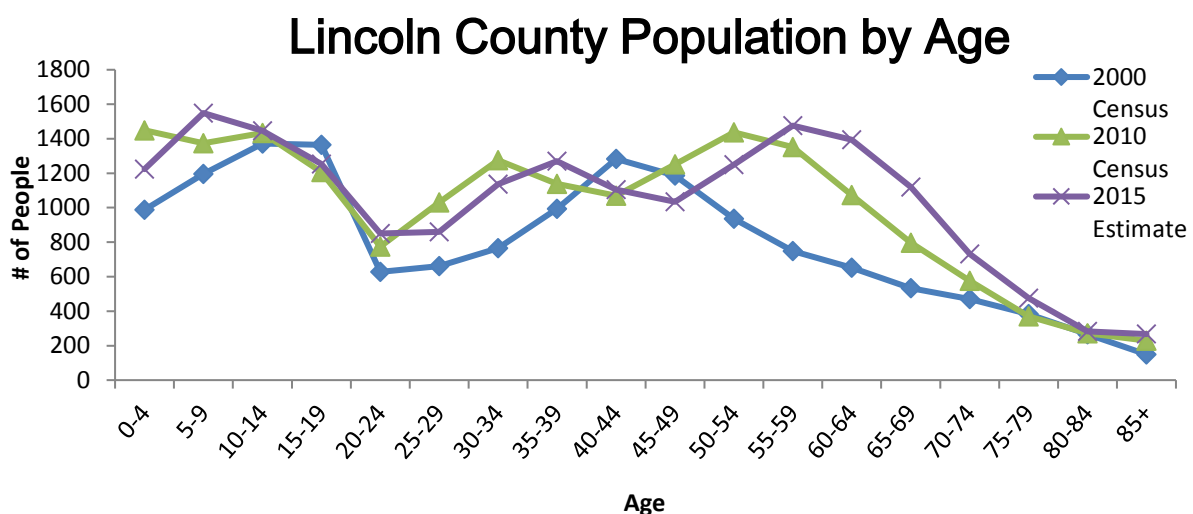
As a side note, Silver Star Communications began monitoring the origin of new customers, and was kind enough to provide this year to-date 2017 information to the Bank, and which is shown below:



Not surprisingly, most new Silver Star customers are local, being from Wyoming and Idaho, states the company serves. But what is interesting is the large number from across the entire US which are relocating to this area, led by California, then Colorado and Arizona.

## POPULATION COMPOSITION

Total Lincoln County population segmented by age groupings for the years 2000, 2010 (U.S. Census counts), and 2015 (EAD Estimate) is shown below.



Source: United States Census Bureau

The population is not static because the graph does not simply move to the right over time. Rather, the population is impacted by migration in and out of the county. From the 2010 census to the 2015 estimate, there have been population declines in two critical age groups – the ‘20-34-year olds’ and the ‘40-50-year olds’. The individuals which constitute these age groups tend to be more risk tolerant, more entrepreneurial in nature, and typically have children in the household. The ‘20-34-year olds’ are at least above the 2000 census in total number, but the critical ‘40-50 year olds’ are below even the 2000 census, which represents a decline over that realized 15 years ago.

The decrease in the size of both age group populations is of concern. Many of the Star Valley businesses are older, with very limited new or start-up businesses. It is felt by the authors that the decrease in these age groups is directly related to the current lack of higher skill employment opportunities in Star Valley as well as an apparent national declining entrepreneurial spirit. Tyler Cowen, the Holbert L. Harris chair in economics at George Mason University, noted in his book *The Complacent Class*, that:

“For the most part, the American economy is more static than it was several decades ago, and that remains one of the most underreported stories of our time.

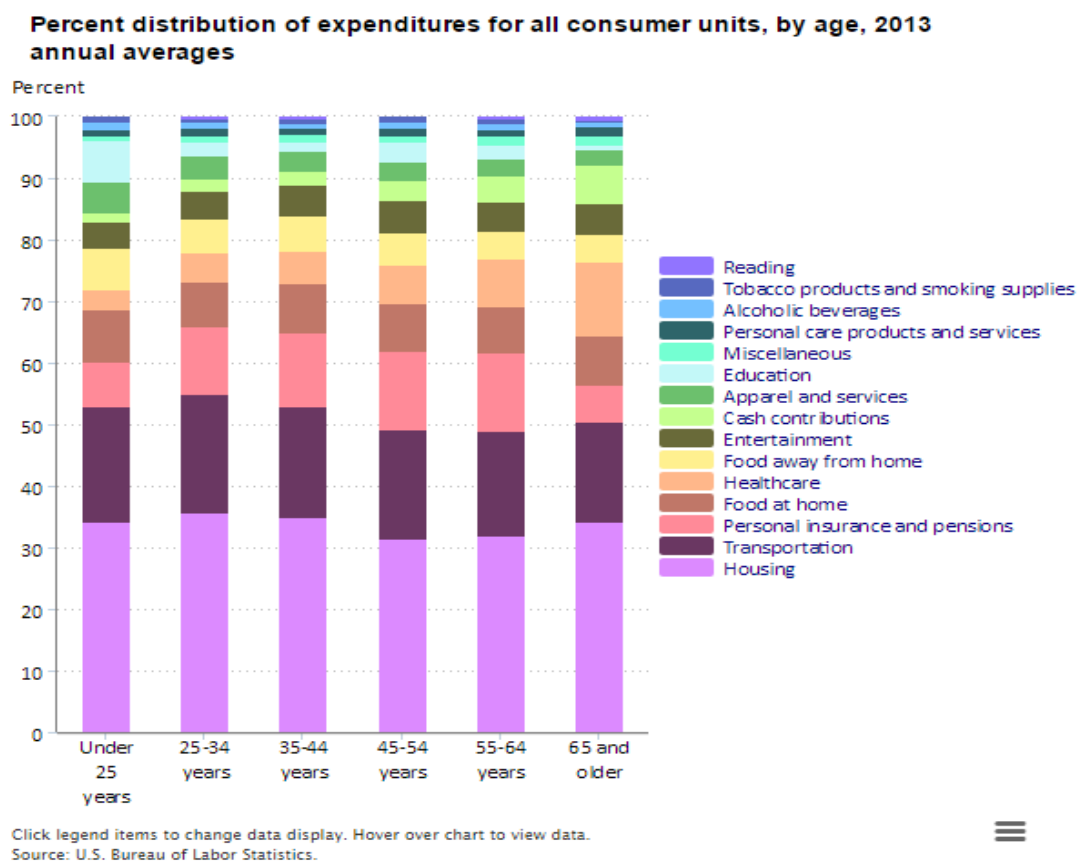
To look at one simple measure of both social and economic stasis, the rate at which business start-ups are forming has been declining since the 1980s. By one estimate, start-ups were 12 to 13 percent of the firms in the economy in the 1980s, but today they are only about 7 to 8 percent. That’s right; for all the talk about Silicon Valley, we are less a start-up nation than before. By the way, this overall decline in start-up frequency is true for virtually every sector and every American City...

Not only are there fewer start-ups, but a smaller percentage of them are succeeding. This means that younger firms are a smaller part of the over-all market and American corporations are increasing in average age, just as the American people are. In the late 1980s, 18.9% of the employment in the American economy was at firms five years or younger. This average has fallen to 13.5% right before the Great Recession; in numerical terms, that is a 29% decline over only seventeen years, a significant and rapid drop.”

Not surprisingly, the 55 and over population is increasing over time – more than any other age group. The Lincoln County population continues to get older and older. This age shift affects the economy of Lincoln County because it modifies the goods and services demanded. Many people in the older age range have selected Star Valley as a place to retire, and not necessarily to actively participate in the work force. These aging individuals demand, in aggregate, more health care services than other age groups. This increase in demand has been a driver for the

local economy as it adds opportunities for medical and retirement service related demand and jobs to the market.

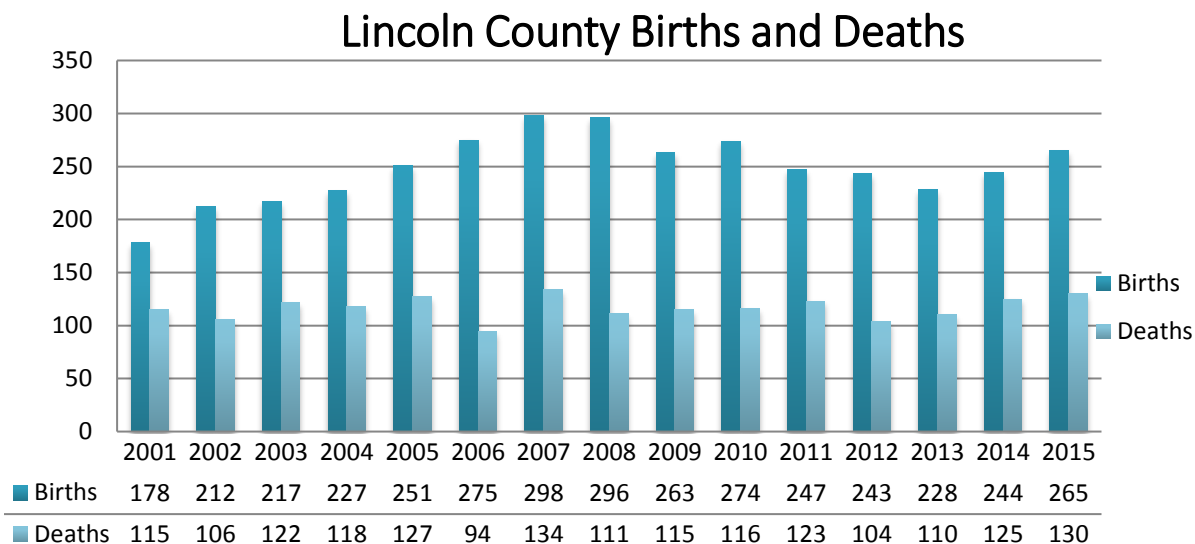
The chart below, created by the Bureau of Labor Statistics, shows the spending characteristics of various age groups. Younger individuals, building households, spend a large portion of their income on housing, transportation, personal insurance and pensions. These expenses account for approximately 65% of income for those 25 to 44 years old. Conversely, those over 65 spend a much larger amount on healthcare services and cash contributions, and they spend less on housing, personal insurance and pensions, apparel, and food away from home. While most of the results of the chart are intuitive, the Bureau of Labor Statistics findings do provide data driven foundational support to differences in expenditures by age and an indication to which commercial sectors will likely do better considering the aging Star Valley population. Although, the information below is from 2013, it's the most recent information available and the authors expect that more current data will not change materially.



Source: Bureau of Labor Statistics

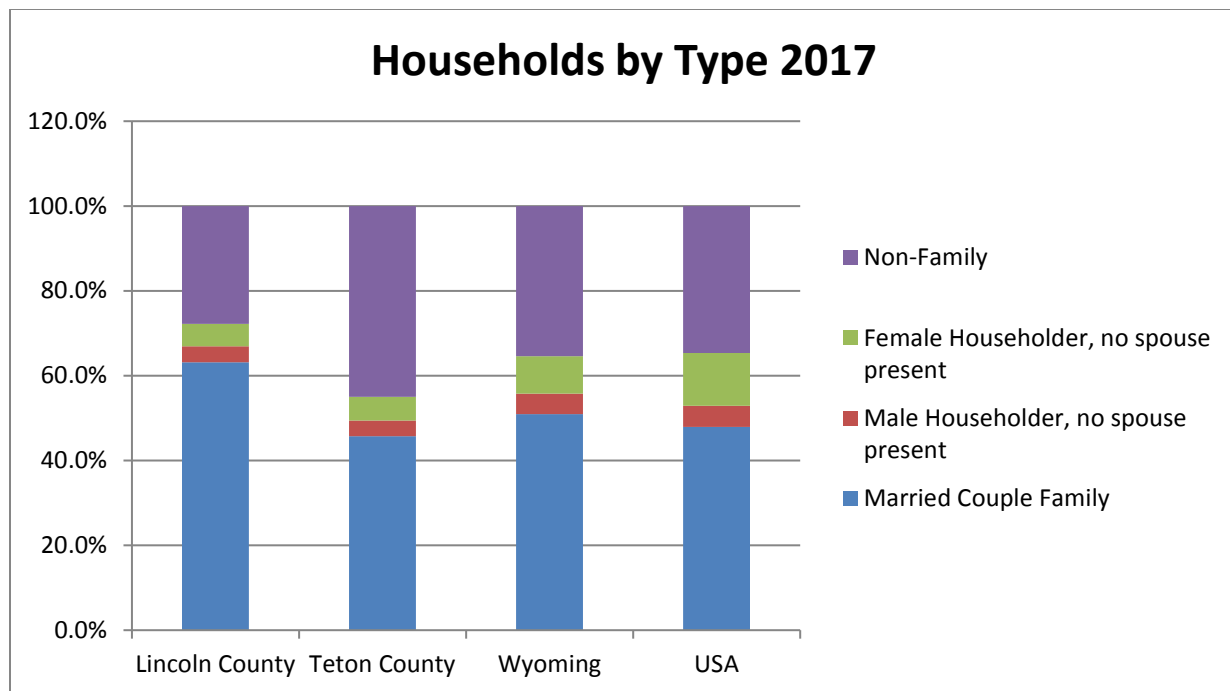
According to the Wyoming Department of Health, both the number of births and deaths in Lincoln County increased in 2015. The total number of deaths was 130, and the number of births was 265; that's an increase of 21 births from 2014 to 2015. Star Valley Medical Center data indicates that there were 101 births in Afton in 2016, and in 91 in 2017.

Since 2012, the number of deaths has been increasing, reflecting the aging population. The trend of births and deaths between the years 2001 to 2015 is shown below.



Source: Wyoming Department of Health

Both SuburbanStats.org and the U.S. Census Bureau perform an estimate of the populations by household types. They estimate the number of family led homes, single parent homes, and non-family homes. Below is a comparison of the family types for the United States (U.S. Census Bureau), Wyoming (SuburbanStats.org), Teton County (SuburbanStats.org), and Lincoln County (SuburbanStats.org) for 2017.



Source: US Census Bureau and SuburbanStats.org

Lincoln County leads the selected peers in the number of married couple family homes at 63.20%. This is one of Star Valley’s assets. Married couple families are less likely to fall under the poverty line than single parent homes. Also, married couple families are more likely to remain in the area for longer being less transient than non-families which are much more mobile. The State of Wyoming follows Lincoln County with 50.92% married couple families, the United States with 48.00%, and then Teton County being the lowest at 45.70%. About nine percent of families are single parent homes in Lincoln County. The percentage of Lincoln County single parent homes is significantly lower than the 17.00% for the United States.

Lincoln County also has the lowest non-family homes, or single individuals with no children, at 27.80%. Teton County had the most non-family homes with a total of 45.00%. The low single-family households in Lincoln County is greatly influenced by the large number of young people who graduate from Star Valley High School and then pursue higher education and career aspirations outside of the area – confirming the unfortunate fact that Star Valley continues to export its youth.

The United States Census Bureau estimates the number of persons living within each respective household in a given area. The average in the U.S., Teton County, and Lincoln County are shown below. Of the groups in this review, Lincoln County is the highest – indicating larger family groups. However, considering a growing aging population in Star Valley, which typically constitutes 1 to 2 people households, this is an indication that the families which have children

in Star Valley tend to have more children than the average. This is supported by school enrollment which is discussed next.

### Persons per household

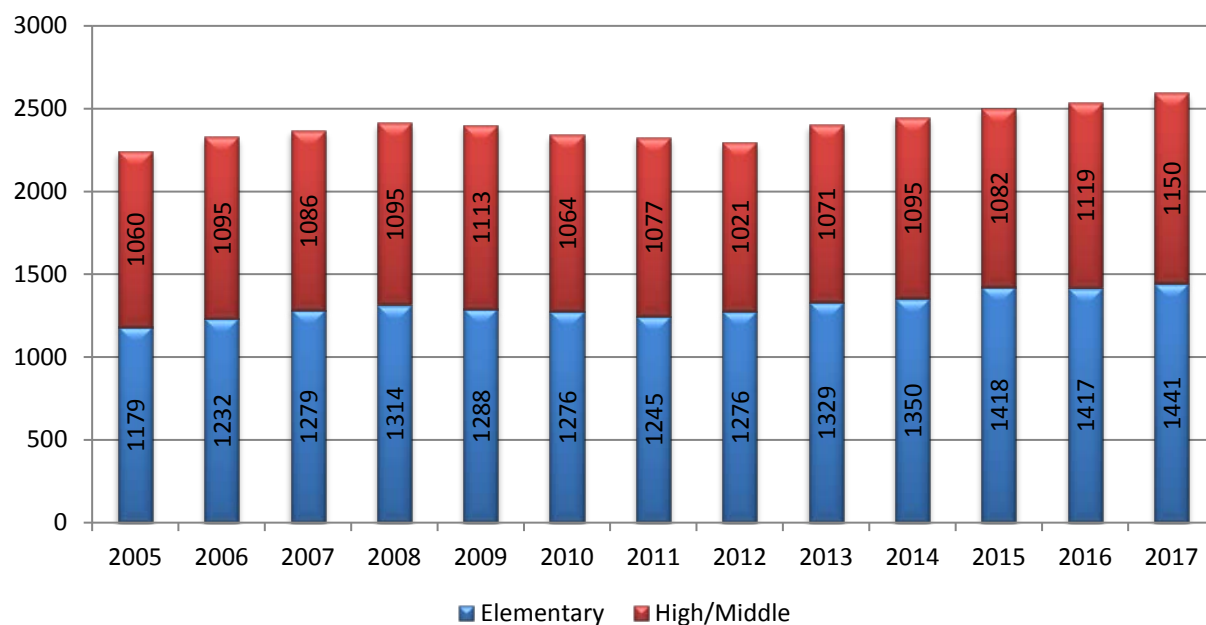
U.S.	2.64
Wyoming	2.49
Teton County	2.63
<b>Lincoln County</b>	<b>2.68</b>

Source: U.S. Census Bureau

## EDUCATION

The total student enrollment is another telling population metric. Since 2012 there has been a continuing upward trend in student population, with 2017 having the highest student enrollment of 2,591 students. Since 2012 when the student population began to increase, Star Valley schools have seen a 4.4% increase through 2017.

### Star Valley Student Population



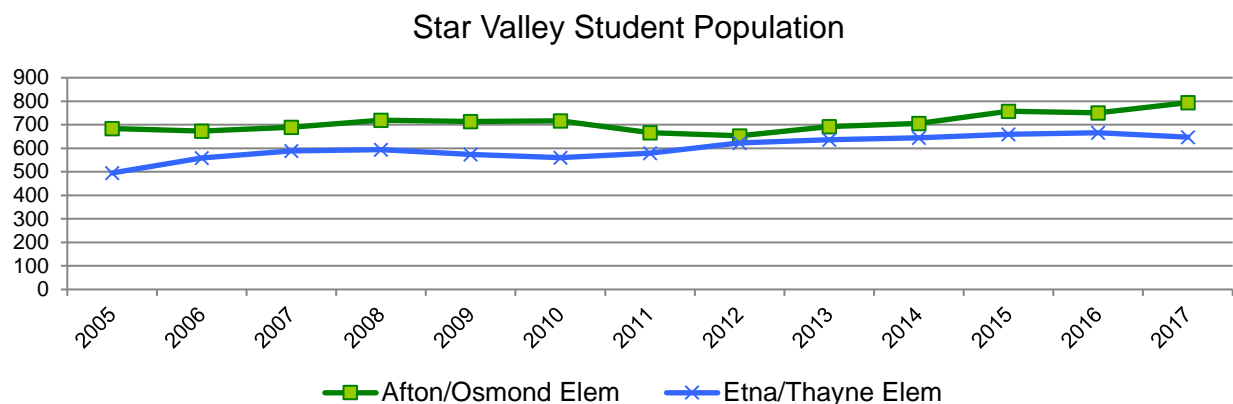
Source: Lincoln County School District #2

Student school enrollment reveals where the student population resides. This metric is illustrated by comparing the number of elementary students attending schools in the upper (south) and lower (north) valley areas – both of which have two elementary (K – 6 grade)



schools. Historically, the upper valley elementary schools have had higher student populations. In 2012 the two areas nearly met with equal student populations. However, since 2012 there has been a clear trend away from this regional equality in number of students with a growing majority of k-6 grade students in the upper valley -- which in 2017 realized a 24-student increase from 2016.

In 2017, 56% of elementary students attended upper valley schools and 44% of them attended the lower valley schools. The increase in the upper valley may be due to the infrastructure located in the upper valley including the middle and high schools and the hospital. For whatever reason, it appears that families with children are currently more probable to locate in the upper valley.



Source: Lincoln County School District #2

The level of educational attainment, or human capital, is an important economic growth indicator. Lincoln County has more high school graduates relative to Wyoming and the United States. However, it has the lowest percentage of college graduates as depicted in the table below.

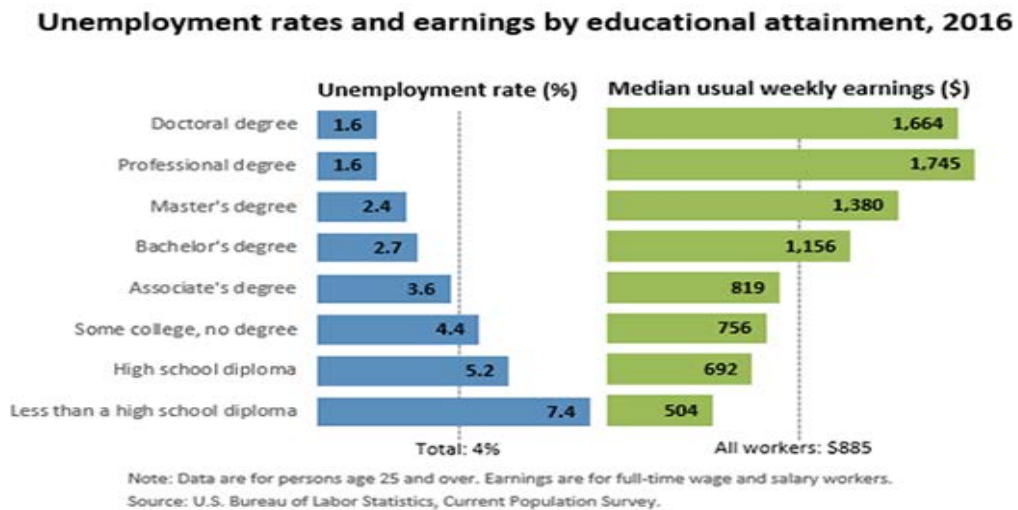
Educational attainment	Lincoln County	Teton County	Wyoming	United States
High School Graduate or Higher	93.40%	95.90%	92.30%	86.70%
Bachelor's Degree or Higher	21.50%	53.90%	25.70%	29.80%

Source: U.S. Census Bureau

The relatively low level of individuals in Star Valley holding a bachelor's degree or higher is concerning since statistics clearly indicate that higher levels of education result in overall lower unemployment and higher salary levels. However, because of the rural nature of Star Valley, the demand for higher degree jobs is lower than in more densely populated areas. As discussed

before, many Star Valley High School graduates leave the valley to pursue education, and then move to other places for employment.

The graph below, provided by the US Bureau of Labor Statistics, shows the correlation between higher education, greater earnings, and lower unemployment rates for 2016. Considering the implications of the impact of education attainment on income, and the lower level of overall educational achievement among the Star Valley population, area income levels would be expected to be lower, an issue discussed later.

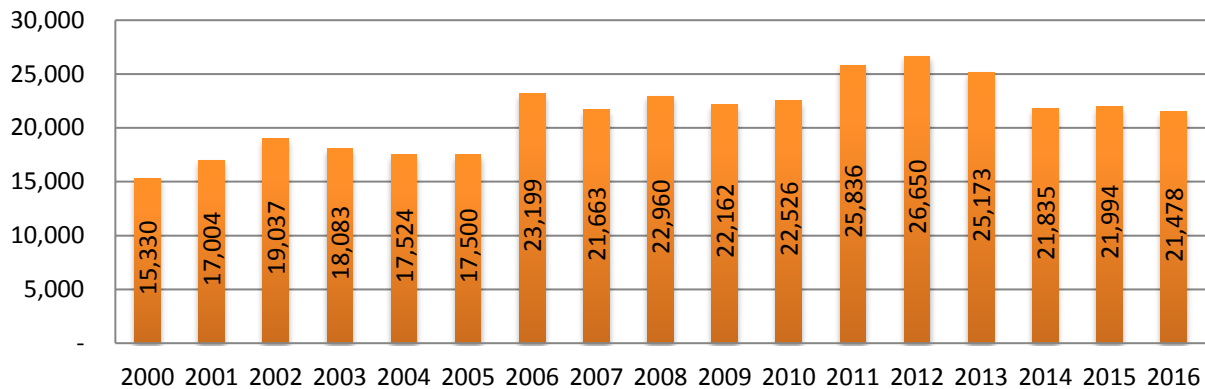


Source: U.S. Bureau of Labor Statistics, Current Population Survey

## 55-YEAR-OLD AND OLDER POPULATION SENIOR CENTER DEMAND.

Working with the Thayne and Afton Senior Centers, the Bank has been able to monitor the number of meals served to senior citizens per year. For Thayne activity, the number of meals served decreased between 2012 through 2016, excepting a small increase in 2015. 2016 meal count was a full 5,172 (or 19.4%) less than the peak realized in 2012. The decrease is felt to have been caused by the Thayne Senior Center exceeding the government allocation for 17,522 meals by around 5,000 meals. The funding for the center was reduced; thus, expansion efforts were also reduced. Additionally, some of the daily regulars passed away, and the center has indicated that “new” seniors appear to be more self-reliant and aren’t eating at the Center as often. In 2016, the total number of meals served was 21,478. This is 516 fewer meals served than in 2015 when it increased to 21,994.

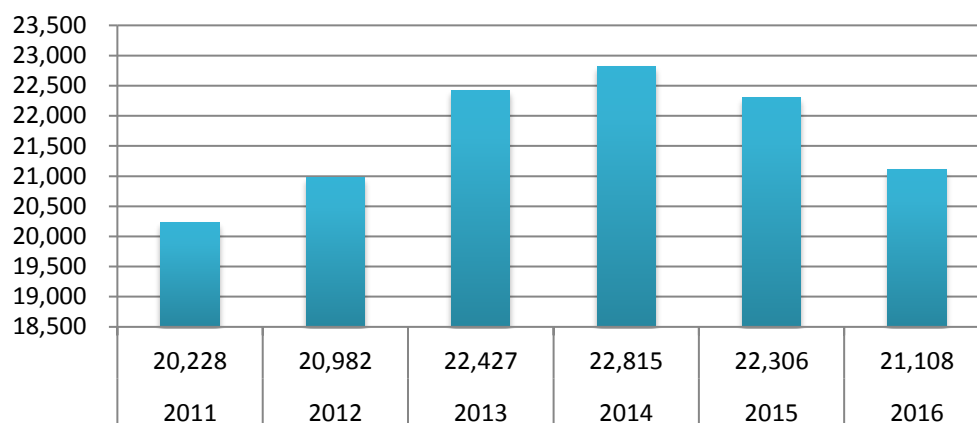
## Thayne Senior Center Meal Count



Source: Thayne Senior Center

As to Afton Senior Center activity, it too is showing decreased meal counts. From 2011 to 2014, the number of meals was steadily increasing. However, right after 2014, the meal counts have decreased just as fast as they increased creating an almost uniform pattern. Since the peak in 2014 the Afton Center has seen demand for meals decrease by 1,707 (or 7.5%) with a total of 21,108 served in 2016. With a documented growing senior population, the meal counts appear to be a paradox. The exact cause of the loss in meal counts in Afton and Thayne is hard to pin point due to all of the variables, including deaths, consumer preferences (seniors choosing to not utilize the senior centers), and/or migration in and out of the market.

## Afton Senior Center Meal Count



Source: Afton Senior Center

## DOMICILE LOCATION

When analyzing the Valley's population growth, it's interesting to attempt to identify where in the area the growth is occurring. One way to attempt to distinguish where the growth is happening is by examining the growth of the incorporated towns under the assumption that they serve as a proxy for the area surrounding them. The table below reports the EAD population estimates of Thayne, Alpine, Star Valley Ranch, and Afton.

**Star Valley Population by Community**

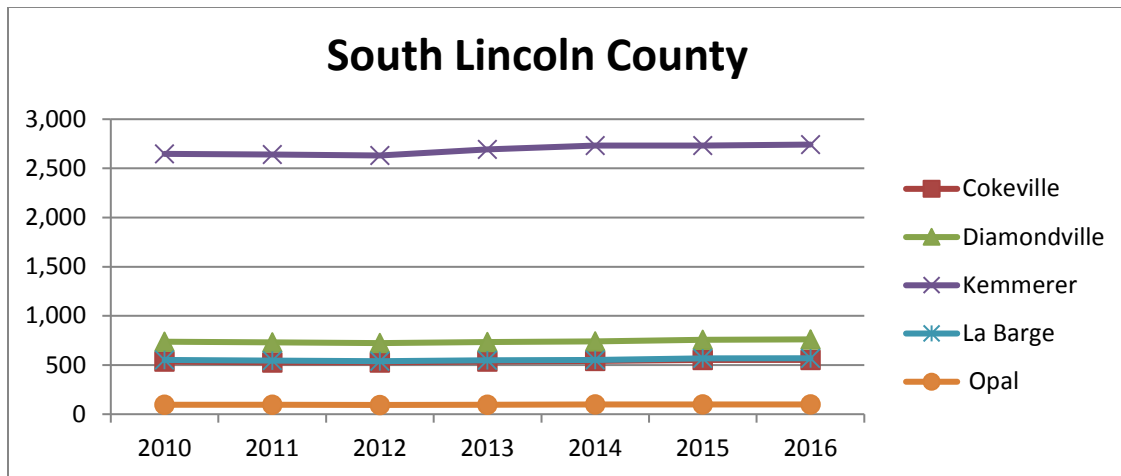
	2000	2010	2011	2012	2013	2014	2015	2016	Change in # People	Growth Rate
Thayne	341	366	360	356	362	364	376	367	-9	-2.64%
Alpine	550	828	822	814	835	845	852	865	13	2.36%
SV Ranch	776	1,503	1,492	1,489	1,523	1,541	1,546	1,570	24	3.09%
Afton	1,818	1,916	1,911	1,908	1,947	1,968	1,965	1,995	30	1.65%

Source: State of Wyoming Department of Administration and Information Economic Analysis Division

Remember that these estimates are based upon a statistical estimation by EAD, and therefore not exact census count. Based on this EAD data, Afton realized 51.72% of municipal population growth in the last year, while the towns in the lower valley together realized 48.27% of the municipal population growth. Only Thayne experienced a decrease in population, being 9 people, but even with that loss, the town still historically had its second highest historical population.

As previously discussed, Star Valley Wyoming grew by approximately 290 to 300 people in 2016. Therefore, of the total population growth realized in the area, only approximately 20% was in a municipal area with the remaining 80% in the surrounding county areas. Historically, it had been concluded that the majority of Star Valley's growth was happening in the lower valley, but there may be a trend emerging of for more equal population growth through-out the entire valley. As previously indicated the upper valley student population is growing faster relative to the lower valley student population; therefore, either there are larger families, more family households, and/or a larger share of the new upper valley population is living outside of Afton.

Due to the economic challenges faced in the coal and energy oil industries, the population of Kemmerer and Diamondville has become a point of interest. According to estimates by the EAD, the population of southeast Lincoln County is nearly stagnant. The Southern County population could be further challenged with the potential closing of the PacifiCorp Naughton Plant Unit 3 at the end of 2018. The closing of the plant will depend on whether PacifiCorp decides to upgrade expensive equipment to meet current pollution regulations. (Storrow: July 11, 2017 ).

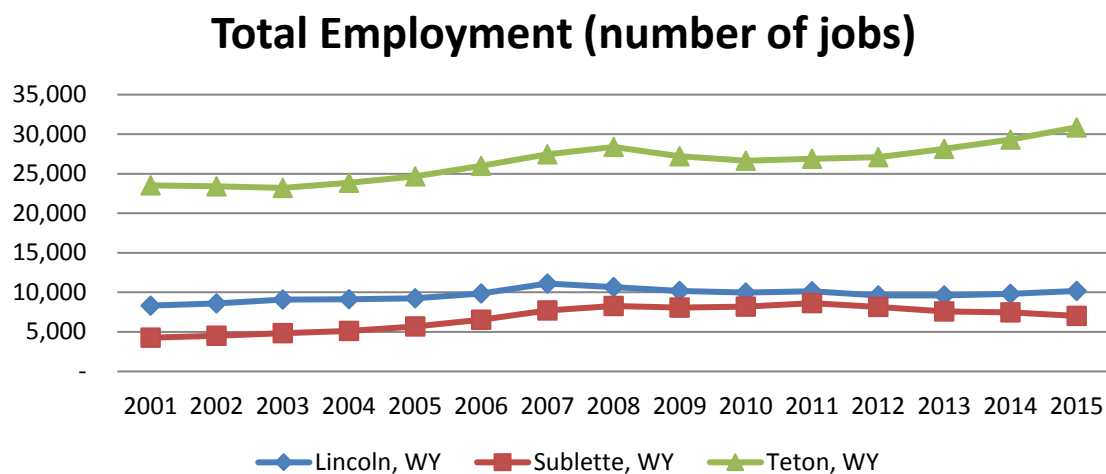


Source: State of Wyoming Department of Administration and Information Economic Analysis Division

The population estimations for South Lincoln County are influenced by population growth statistics which occurred before the energy downturn which began in 2014 for coal and oil. Thus, the authors feel that population changes in this area may be seeing negative pressure which is not represented in the data. If this is the case, and Lincoln County Population is growing in aggregate, then the population of Star Valley may actually be increasing faster than anticipated by EAD or the authors.

## EMPLOYMENT AND WAGES

The U.S. Department of Commerce provides information on the labor market of each county in the United States. The labor force is a count of both full-time and part-time employment for wage/salary employment as well as proprietors' employment for an area. Please note that the labor market may include jobs for which a person residing in another area fills. The graph below shows the trend for Lincoln, Teton, and Sublette counties.



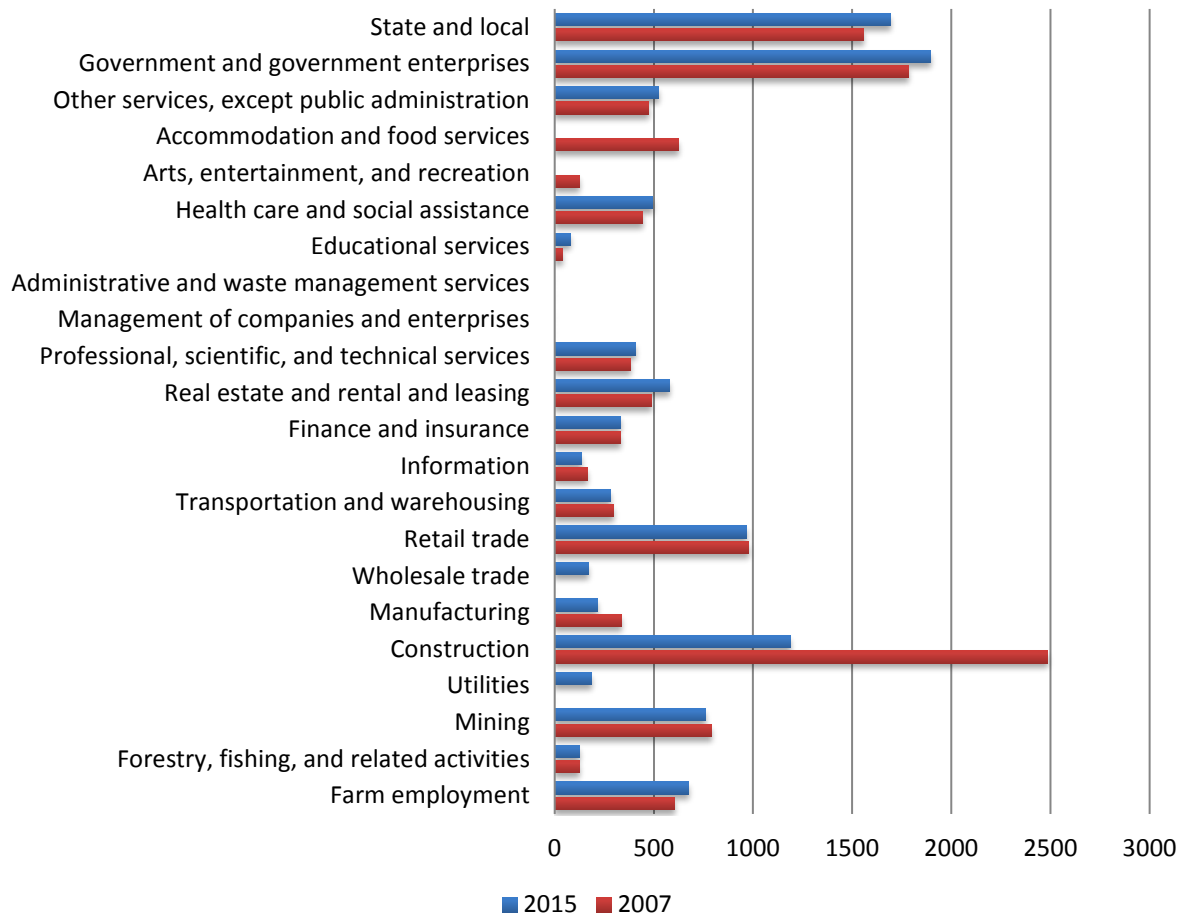
Source: Bureau of Economic Analysis

In Lincoln County, the labor force reached 10,164 making it the fifth time it's reached over 10,000 since 2001. Overall, the total labor force has remained fairly consistent in Lincoln County, staying close to approximately 10,000 with marginal annual increases or decreases. As previously indicated, this fairly stagnant level of employment in Lincoln County is a significant cause of the loss of the 20-45-year-old demographics as these younger, energetic individuals leave the local area in pursuit of higher education, employment, and careers.

Sublette County, an energy dependent county, saw a loss of jobs, dropping to 7,039 jobs in 2015. Teton County, a tourism and recreational based economy is realizing a fairly constant upward trend in the number of jobs, ending 2015 with 30,868. This is a most interesting statistic in that the number of 2015 jobs is larger than the estimated 2016 Teton County population of 23,191. If the number of jobs in Teton County is in fact correct, and given that no area has 100% labor force participation rates, Teton County clearly imports a considerable percent of its employment base daily through commuting from surrounding areas, including Star Valley.

While analyzing the labor market, it is helpful to break down the labor market by industry to provide insight into the dominate sectors. To give perspective, 2007, or pre-recession employment by industry, are compared with the most current available numbers, which are for 2015. The largest impacted industry over the period in review is construction. In 2007, the Lincoln County construction labor force was 2,484, and then drastically dropped, settling at less than half that number with 1,189 jobs in 2015. While the construction labor force began decreasing starting with the Great Recession, it did show a slight recovery from previous periods. Many of the other industries in Lincoln County are nearly back to the pre-recession numbers. There has been growth in government, accommodation, health care, and education service jobs over the last few years.

## Lincoln County Employment by Industry



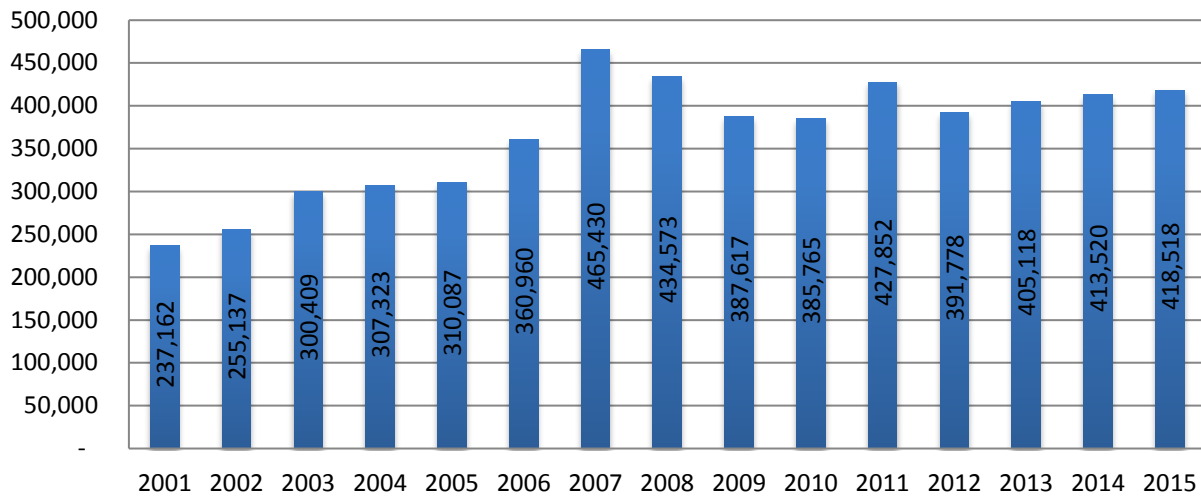
Source: Bureau of Labor Statistics

Paychecks and the size of the paycheck are very significant bottom-line factors for well-being as far as the employees are concerned. Earnings are also an important economic indicator because earnings are an essential component for consumer consumption. In the U.S., consumer spending is estimated to contribute approximately 71.0% of total national GDP.

The earnings graph for Lincoln County, which is below, illustrates the same trend as the labor force graphs with a large peak in earnings in 2007, at \$465,430,000, and then the negative impacts of Great Recession. Beginning in 2011, there has been an upward trend in Lincoln county aggregate earnings, ending 2015 at \$418,518,000. Unfortunately, Lincoln County aggregate earnings remain a full \$46,912,000 below the peak realized in 2007. While the number of jobs stayed fairly consistent, reaching a little over 10,164 jobs in 2015, the wages are showing very a moderate rate of increase. Total earnings increased by 1.20% from 2014 to 2015.



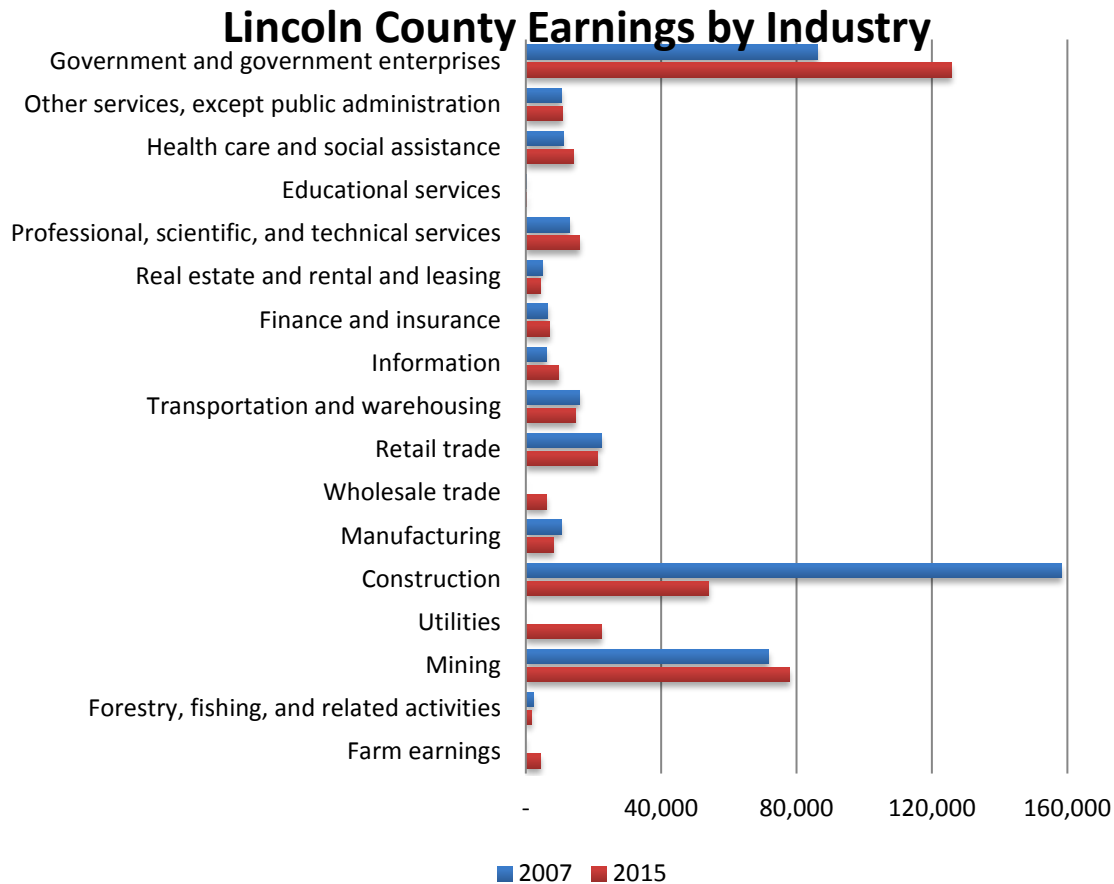
## Lincoln County Earnings (In Thousands)



Source: Bureau of Economic Analysis

### EARNINGS BY INDUSTRY

The following chart below shows earnings by industry for Lincoln County. Again, the most current data from 2015 is compared to the pre-recession numbers of 2007. Consistent with the loss in labor force, the largest earnings difference is in the construction industry. Although construction earnings experienced a large decline after the recession, it remains one of the largest industries in Lincoln County. There has been positive earnings growth in most industries except the large decline in construction as well as modest declines in transportation, manufacturing, and forestry.



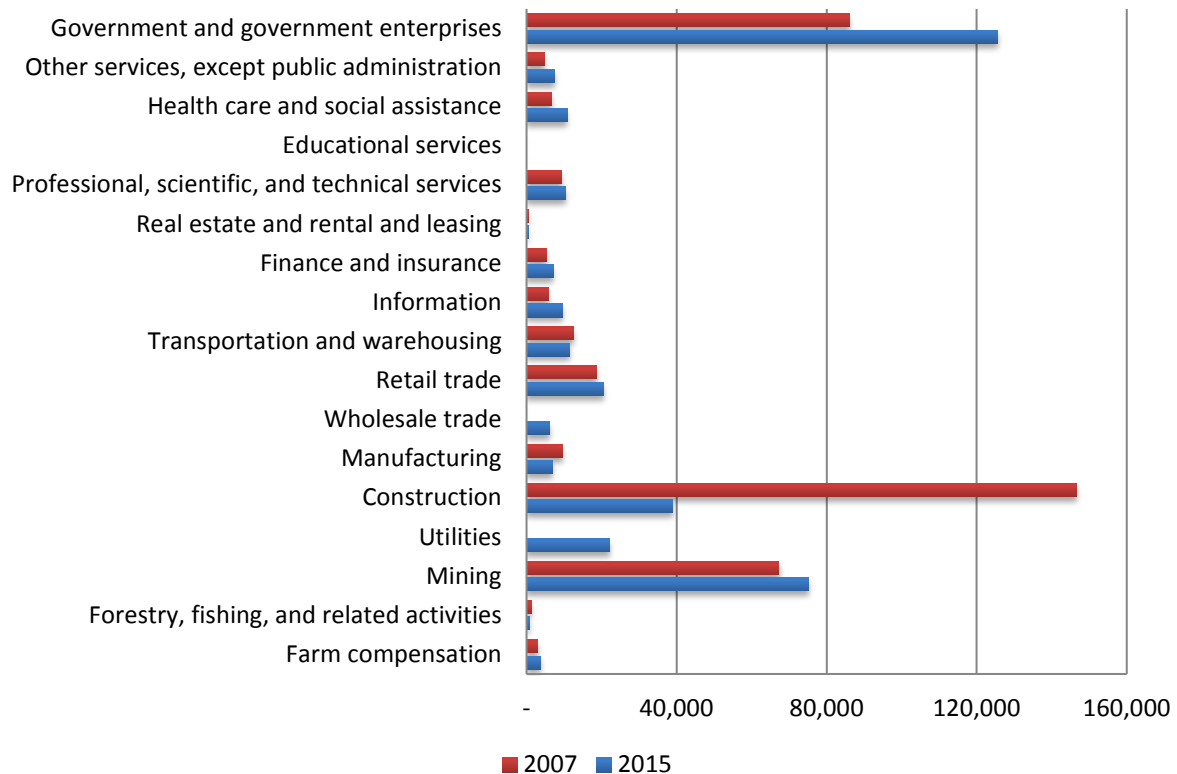
Source: Bureau of Economic Analysis

According to Wyoming's Economic Summary, the earnings for most industries in 2016 have decreased in comparison to 2015 with mining and farming having decreased the most (Economic Summary: 1Q2016). These numbers have not yet been spread out to the county level. However, based upon this state trend, it is very probable that earnings in Lincoln County in these industries may be also decreasing, but such is not yet known.

## PERSONAL COMPENSATION BY INDUSTRY

Personal compensation by industry is calculated by dividing the total compensation per industry by the number of employees in that respective industry. The purpose of this statistic is to get an estimate of an average wage earned per industry. Because the calculation of this number is not highly detailed, these results should only be used in examining overall trends.

## Lincoln County Compensation by Industry



Source: Bureau of Economic Analysis

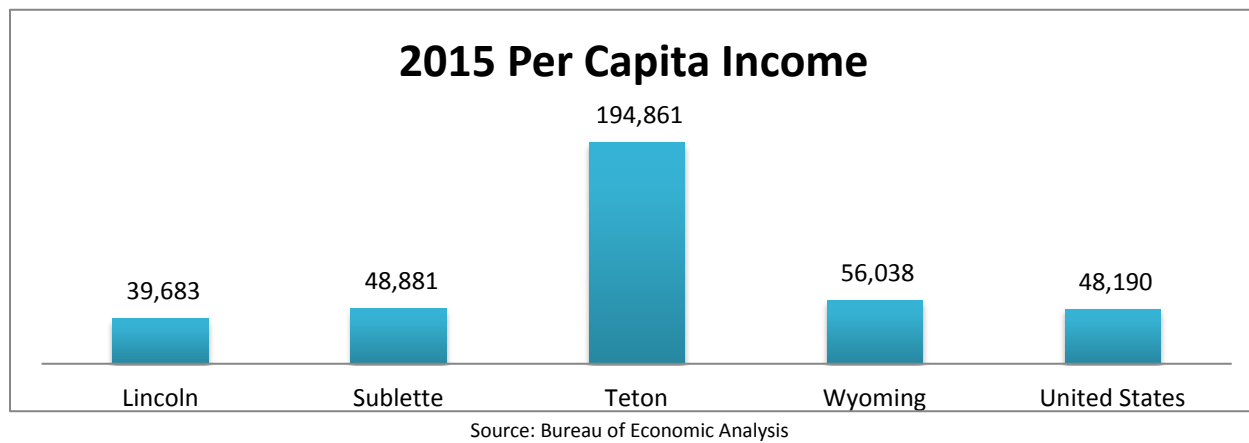
Again construction has experienced a very large decline over the period in review, while government related jobs experienced the largest increase. It is felt by the authors that these two segments may be reversing course as construction projects are currently strong in the area in 2017, while the State of Wyoming is working on reducing its current expenditures, including number a government employees and wages, to meet current budget constraints.

### PER CAPITA INCOME

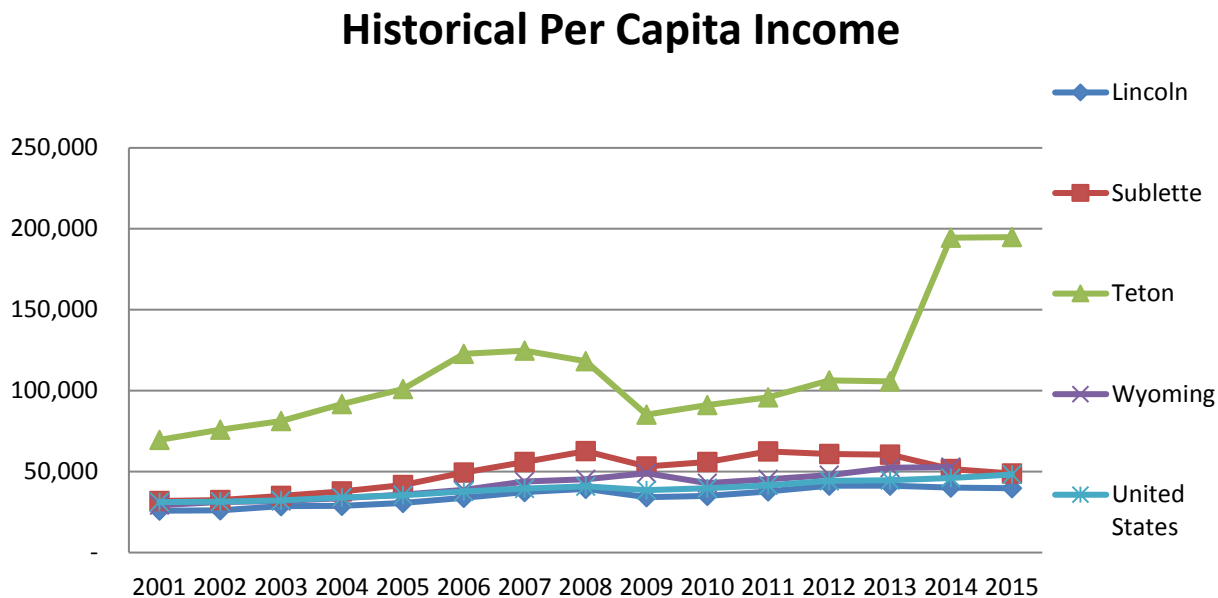
Per capita income is calculated by dividing total area income by total population. This key economic indicator allocates aggregate income into a per-individual (capita) basis in a given area. Per capita income is often used as a high level indication of overall economic health and a measure of the quality of life.

The most recent statistics at the county level are for 2015. Using this data, the chart below compares the 2015 per capita income of Lincoln, Teton, Sublette Counties, the State of Wyoming, and the United States. As has been the fact for over 20 years now, Teton County's per capita income is much larger than the surrounding areas and the nation. Aside from the

Teton County outlier, the other areas report per capita income between \$39,683 and \$56,038. Unfortunately, Lincoln County is the lowest with 2015 per capital income of \$39,683, a full \$9,198 below the closest peer, being the State of Wyoming.



Historically, based on per capita income, Lincoln County has been lagging behind the neighboring counties, as well as the State of Wyoming and the United States as is indicated in the following graph. On average, Lincoln County residents have less spending power on an individual resident basis than the people in neighboring counties, the state or nation.



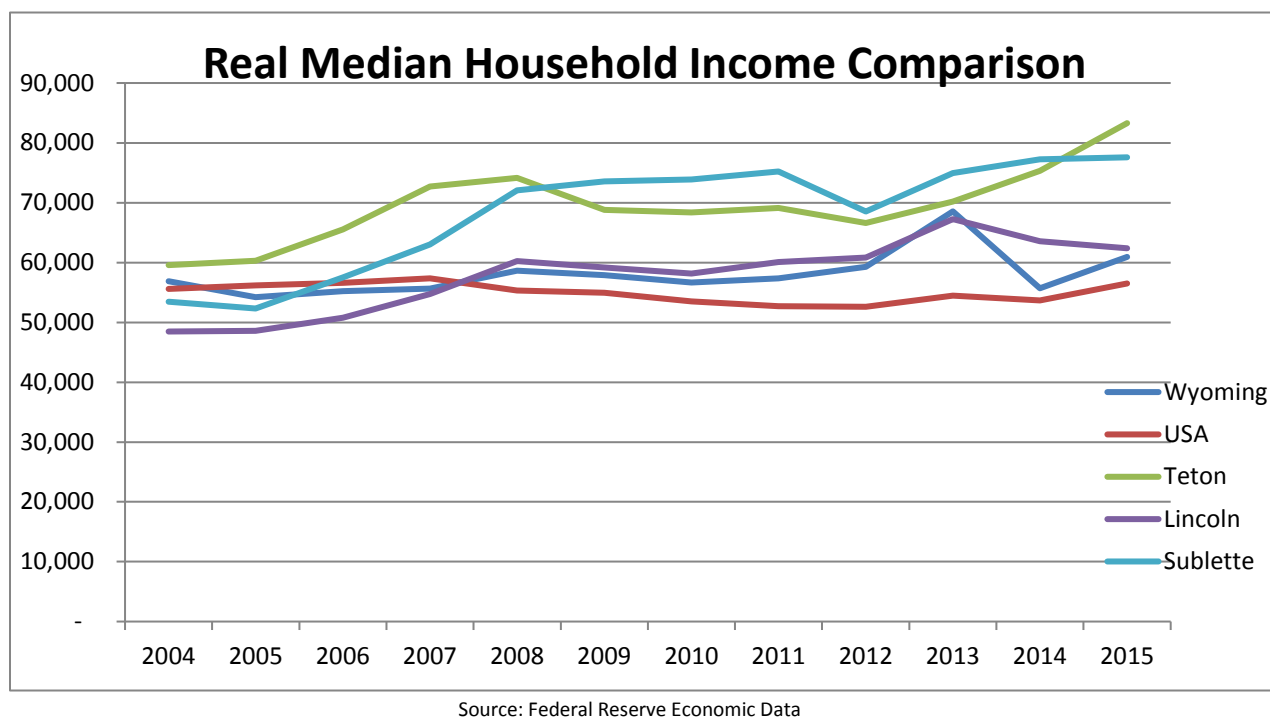
Source: Bureau of Economic Analysis

As discussed earlier, for the peer group reviewed, Lincoln County has the most married couple family led homes, the greatest number of persons per household, a growing senior population, and lower levels of education. These factors all converge to directly contribute to the lower

Lincoln County per capita income statistic. Until these demographic factors change, Lincoln County is destined to be a lower per-capita income area.

However, a structural issue with the per capital income statistic is that it can be skewed by a few very wealthy individuals – and may not correctly represent the average or typical area populations well-being. Fortune magazine posted an article titled “This Playground for the Rich Is the Most Economically Unequal City in America”. The article reported that Teton County, Wyoming is the most economically unequal area in the United States according to the Economic Policy Institute. The top 1% earns 68.3% of the income and the bottom 90% earns 17.3% of the income (Matthews). Therefore, on an individual basis the very high per capita income statistic may be misleading as to the general wellbeing of most Teton County, Wyoming, citizens.

To help smooth out the issues with the above-mentioned factors, a different economic indicator, real median household income, is utilized. The graph below compares Lincoln, Sublette, and Teton Counties, the State of Wyoming, and the United States. Lincoln County has consistently been higher than Wyoming and the United States with respect to real median household income. Surprisingly, Lincoln County’s real median household income did not decrease dramatically during the Great Recession indicating construction workers who lost employment were able to re-employ in other industries, which it is believed by the authors to have been largely oil related.



Of concern is the decrease in Lincoln County's real median household income which began in 2013. While two years do not constitute a long-term trend, there is clearly a real decline in Lincoln County real median income during this period while the peer groups have realized increases in this metric. The authors feel that this may be largely driven by the energy industry impacts in South Lincoln County, and not necessarily driven by the Star Valley market. However, it may represent a lack of wage growth also.

## POVERTY LEVEL

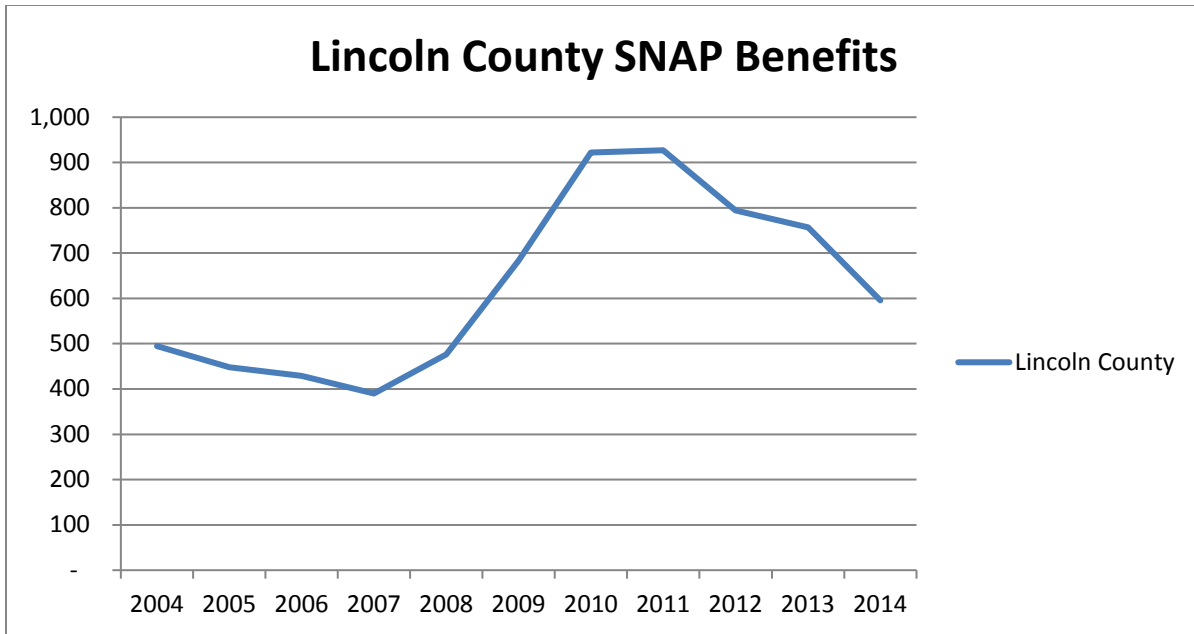
Income and the quality-of-life factors may be represented by the number of people living beneath the poverty level. The fewer the number of individuals below the poverty level the better the general overall population is. The following chart compares Lincoln County, Teton County, Wyoming, and the United States poverty levels based upon the US Census Bureau's estimates for 2013 through 2015.

Persons in poverty, percent				
	Lincoln	Teton	Wyoming	United States
2015	8.80%	6.60%	11.10%	13.50%
2014	9.00%	7.70%	11.20%	14.80%
2013	6.90%	8.20%	11.50%	15.40%

Source: U.S. Census Bureau

While Lincoln County has lower relative per-capita income, it also has a lower percentage of persons below poverty level than Wyoming and the United States which is somewhat surprising given its lower per capita income. This indicates a more even distribution of income over the entire population of Lincoln County. However, between the 2013 through 2015 estimates, Teton County poverty percentage decreased by 1.60% and Lincoln County's increased by 1.9%. This overall increase Lincoln County population living in poverty is troublesome. The downturn could potentially be related to the recent loss of jobs within the energy sector in South Lincoln County. The authors argue that the Star Valley economy is closely tied to Jacksons, and therefore, would expect that the percentage of the Star Valley population living in poverty would more closely mirror that of Teton County.

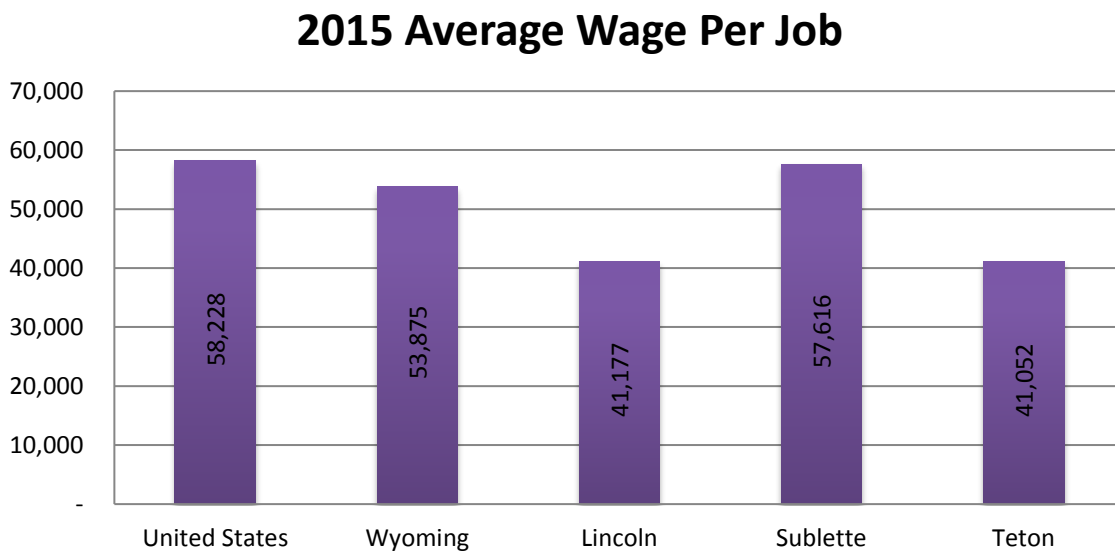
Poverty levels can also be estimated by the number of people participating in the Supplemental Nutrition Assistance Program (SNAP). The number of SNAP recipients in Lincoln County peaked in 2011 after the Great Recession with 927 recipients (7.41% of total population). Since then, the number of SNAP recipients has been steadily decreasing. In 2014, the most recent information available, the total number of recipients was 596 (3.2% of total population). The graph below depicts the trend of SNAP benefits recipients from 2004 to 2014.



Source: Federal Reserve Economic Data

## AVERAGE WAGE PER JOB

The average wage per job represents the actual wage income that would be reported on a W2, or the taxable consideration received from an employer to an employee. It does not include other non-wage income sources such as dividend income, business income, or interest income. The average wage per job for Lincoln County, Teton County, Sublette County, Wyoming, and the United States are compared in the graph below.

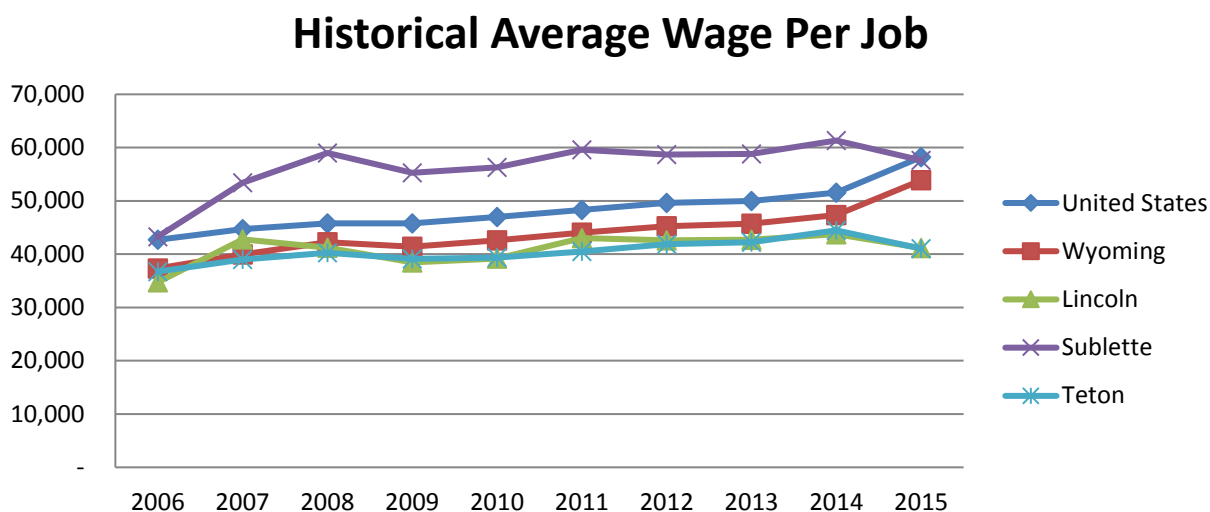


Source: Bureau of Economic Analysis



Lincoln County's average wage at \$41,177 is \$12,698, or 23.6% lower than Wyoming and \$17,051, or 29.3% lower than the United States. It is, however, just slightly larger than that realized in Teton County.

Historically, Lincoln County has had one of the lowest average wages per job. Lincoln County has maintained a consistent level of wages per job over the last few years, and has tracked close to that of Teton County. The graph below compares the historical average wage per job for Lincoln County, Teton County, Sublette County, Wyoming, and the United States. Again, Lincoln and Teton average wage per job is nearly identical, with both counties being below national and state averages. Further, the average wage paid per job for both Lincoln and Teton counties showed a decrease in the last year in the data set – which correlates to the decline in median household income in Lincoln County.

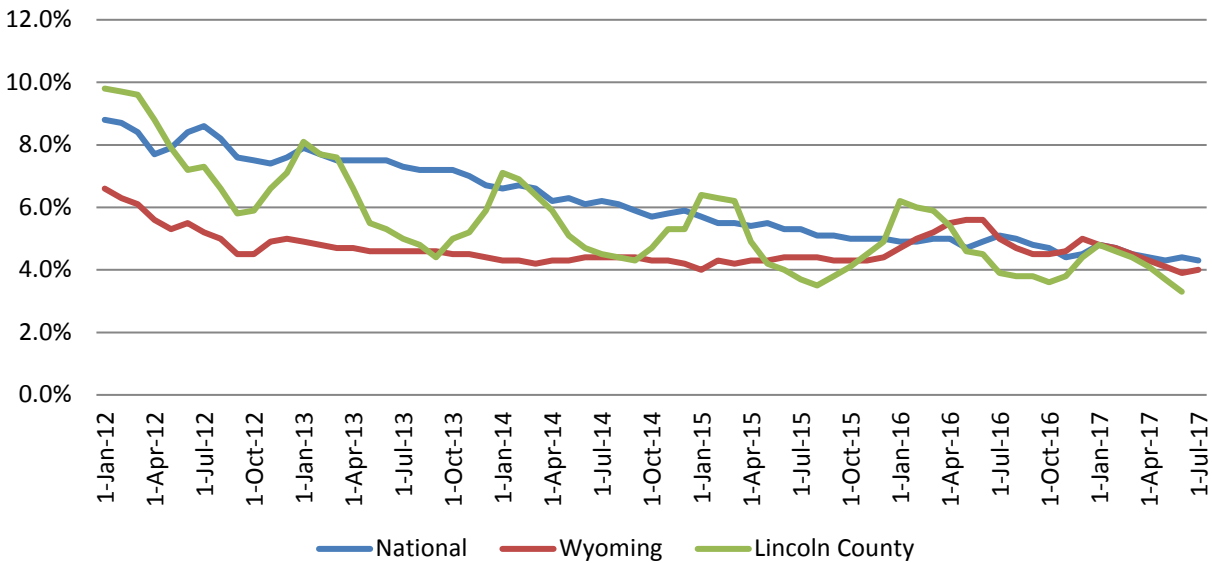


Source: Bureau of Economic Analysis

## UNEMPLOYMENT

A significant economic indicator is the number of unemployed individuals in an area. People who are unemployed, but are looking for a job, are included in the unemployment numbers. The unemployment statistics for Lincoln County, Wyoming, and the United States are compared in the following graph.

## Comparison of Unemployment Rates Jan 2012 - July 2017



Source: U.S. Bureau of Labor Statistics and Federal Reserve Economic Data

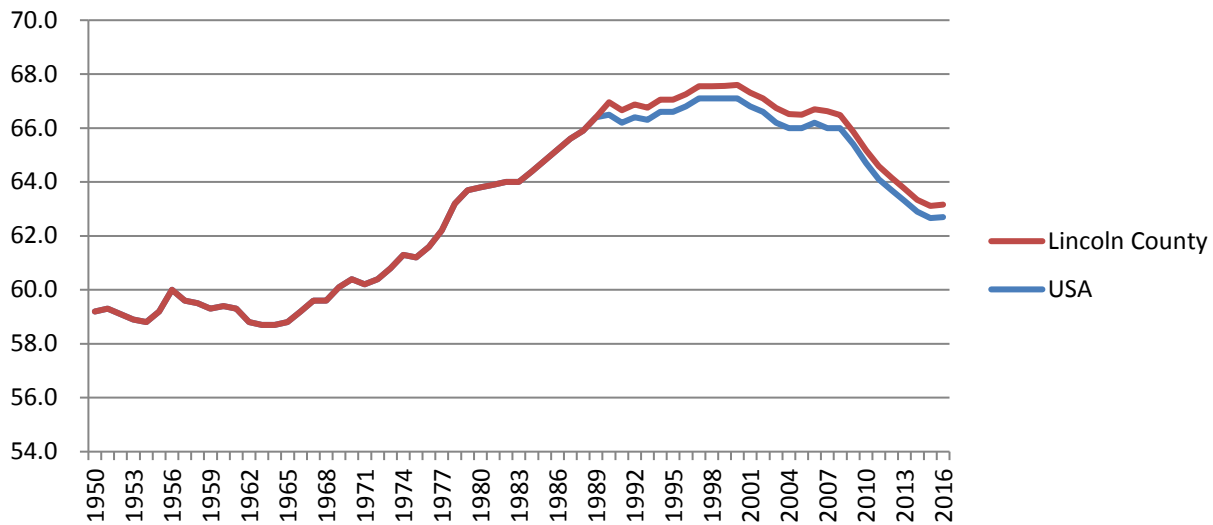
This graph is not seasonally adjusted for Lincoln County unemployment. This is evidenced by cyclical increases and decreases in the Lincoln County unemployment line. Clearly, in Lincoln County many people become employed in the summer construction and tourist related months and then become unemployed in the winter. This cyclical unemployment tread does directly impact per capital income and total wages, as unemployment benefits are not counted as part of total wages. Further, unemployment compensation is at the lower end of the income scale.

The Lincoln County and United States unemployment rates have been trending downward for the last few years, which is a positive economic indicator. FRED's data for the first quarter of 2017 reported that employment declined for both the U.S and Wyoming to 4.7% in comparison to the same period last year. (U.S. Bureau of Labor Statistics: 1Q2017).

To get a more complete perspective of employment demographics, however, one must also consider the civilian labor force participation rate. The unemployment rate only considers those individuals that are working or are actively seeking for a job. The civilian labor force participation rate is defined as "All persons classified as employed or unemployed ... as a percent of the civilian non-institutional population" (Glossary).

The graph below shows Lincoln County labor force participation rate in comparison to the United States.

## Civilian Labor Force Participation Rate

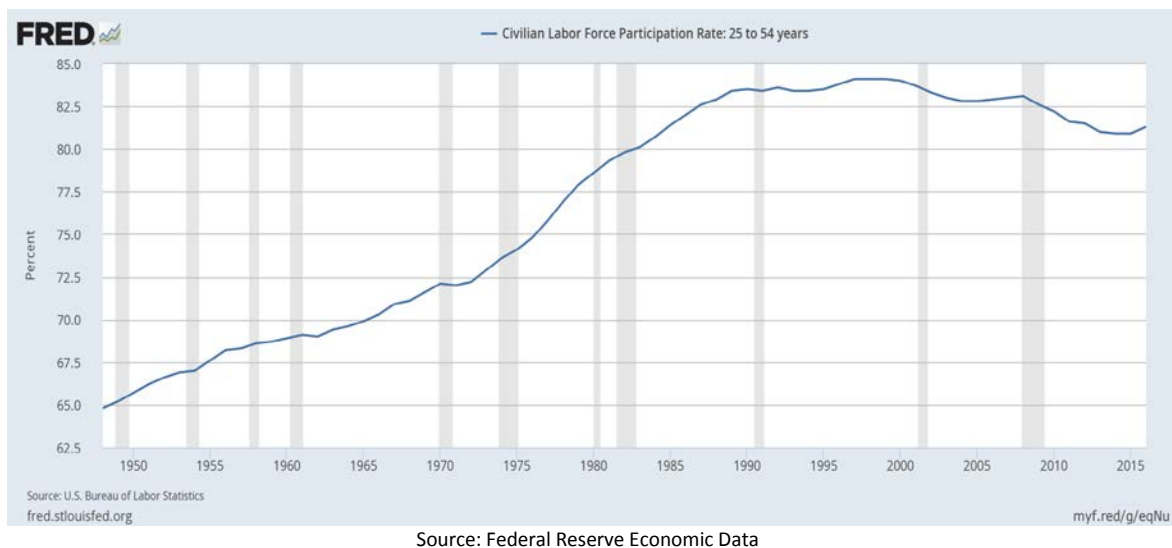


Source: Federal Reserve Economic Data

Lincoln County labor force participation trends to closely mirror that of the United States – with a slightly higher participation rate. The downward trend from 2000 in labor force participation is thought to be caused primarily by two causes which are: the generation of baby boomers which are a growing population segment in Star Valley and are transitioning from employment into retirement; and two, the job market may not have fully recovered from the Great Recession and energy downturn – meaning that some individuals are frustrated with the lack of job opportunities and may have given up seeking employment altogether. The steady downward trend has been troublesome because it could indicate that the total population is becoming less productive over time as a lower percentage of the population participates in the labor force. However, based on changes beginning in 2015 there's room for optimism as the decline stopped, and labor force participation began to show very slight increases in 2016. An increase in the Lincoln County labor force participation is contradicting total jobs and employments data discussed previously. It's hard to explain the change in participation considering a modest increase in jobs, a growing older age segment, and loss of younger workers. A potential explanation of this apparent contradiction may be due to housing prices which are increasing, causing more members of a household to work. Another possibility, which will be verified with future data, is that more and more young people are now beginning to stay in the valley.

The concept that younger people may be remaining in the area instead of moving out for educational and career opportunities is somewhat supported by the civilian labor force participation rate for individuals between 25-54 years of age. The graph, shown below, starts with 64.8% labor force participation for this age group in 1948 and gradually rises to 84.1% in

the late 1990s. The steady increase can be attributed primarily to more women joining the work force. However, since then, it has been gradually declining. Recently, 2016 data indicates that the labor force participation for this demographic has begun to increase reaching 81.3%.



## AREA EMPLOYERS

Every year, the Bank surveys several of the employers in Star Valley to attempt to determine changes in labor demand. The Bank asks each respective employer for the number of employees that work at that business and that live in the Star Valley area. By tracking the number of employees, the Bank can gauge general area employment trends. The findings of the 2017 survey are shown below:

### Employment by Area Major Employers

Employer	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 YTD	Gain/Loss
1ST Bank (Afton & Alpine)		12	13	13	11	11	14	13	11	23	22	-1
Aviat Aircraft	70	49	50	48	36	50	48	47	49	43	44	1
Bank of Star Valley (All Branches)		28	28	27	26	24	24	24	25	24	25	1
Freedom Arms	13	14	13	14	12	12	14	15	14	15	15	0
J.R. Simplot	200	220	220	240	250	270	270	270	270	250	250	0
Lincoln County Government	153	162	163	162	162	151	66	60	60	145	145	0
Lincoln County School #2	464	470	470	470	489	492	488	490	490	600	600	0
Lower Valley Energy	48	46	43	44	42	47	45	48	48	64	65	1
Silverstar Communications	66	67	88	87	88	67	87	80	80	79	79	0
Star Valley Medical Center	185	230	220	218	239	263	275	284	284	228	254	26
Polyguard & RMP Mobile	15	16	16	16	15	15	9	14	13	15	15	0
Wells Fargo (Afton & Thayne)		9	9	13	9	7	11	10	11	6	5	-1
PC Industries			25	31	25	30	30	30	33	30	30	0
No Longer Existing Employers	25	4	4	2	0	0	0	0	0	0	0	0
Jackson Workers	1069	1173	868	926	970	990	823	823	1075	1089	1140	51
<b>Total</b>	<b>1239</b>	<b>1327</b>	<b>1362</b>	<b>1385</b>	<b>1404</b>	<b>1439</b>	<b>1381</b>	<b>1385</b>	<b>2463</b>	<b>1522</b>	<b>2689</b>	<b>226</b>

Local banks were added during 2008 Economic Analysis. 2011 & 2012 Jackson comes from LC Commuter numbers

First Bank's employment numbers show a false increase in employment because 2016 includes both the Afton and Alpine branch while the previous data only included Afton. 2016 data includes only Star Valley Simplot employees whereas the past years included all employees. The mine reported a small downsizing in 2016 but reported the same number of employees again for 2017. In addition, the school district numbers were adjusted to exclude Cokeville.

The Medical Center experienced a 26 person increase, which is by far the largest employee increase for employers in the valley. The number of Jackson commuters segment had the largest overall increase with 51 additional people this year. The "Jackson Workers" number is derived from a car count performed by the Bank the week of July 5<sup>th</sup> each year and presents the average of Wyoming and Idaho licensed autos, Start Bus passengers, and selective local area commercial traffic for the time between 5:00 a.m. and 8:00 a.m. on Monday, Wednesday, and Friday of the subject week. It does not represent a total census of Star Valley commuters driving to Jackson market, but rather does provide a trend line to review changes overtime. This statistic can provide a reasonable estimate of how many Star Valley residents are employed in Jackson. The 2017 study indicated a new peak for Jackson based commuter traffic, which does tie logically with the currently strong Teton County economy.

Many people drive to work not only in Jackson, but to the Simplot mine, or drive within the Valley to get to their jobs because of the rural nature of the area. The US Census Bureau calculates mean travel time. Looking at the most recent data from the U.S. Census Bureau the average travel time to work in the U.S. in 25.4 minutes. Wyoming, a very rural state, averages travel time is less, at 18.3 minutes. However, Individuals living in the lower valley have a substantially longer commute than the U.S. or Wyoming average. Individuals living in the upper valley have a shorter commute on average to work. Lower Valley Lincoln County employees, in the aggregate, spend more time commuting to work than any other of the reviewed segments, which represents the large segment of employees who have employment either in Jackson or Afton.

**Average Work-Related Commuting Time in Minutes**

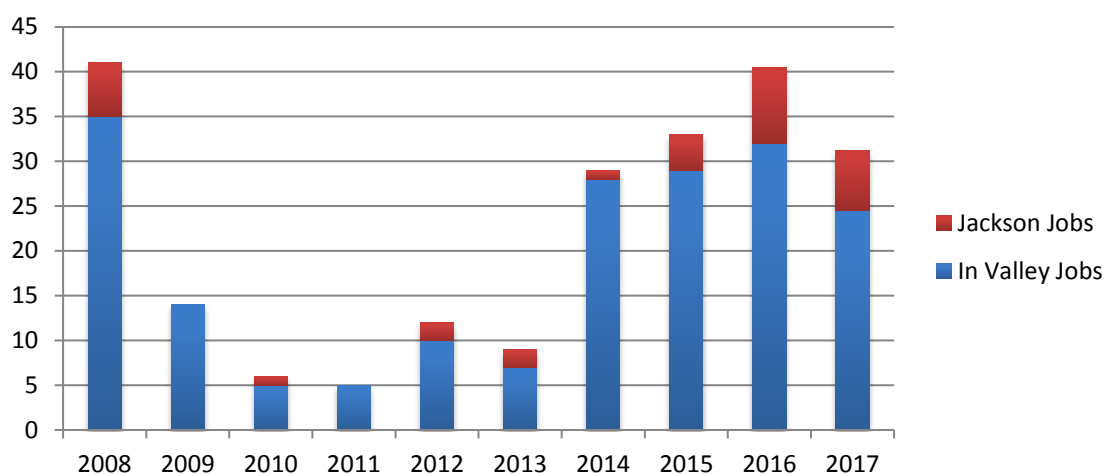
<b>Upper Valley</b>	<b>Lower Valley</b>	<b>Teton County</b>	<b>Wyoming</b>	<b>US</b>
20.0	35.7	14.3	18.3	25.4

Source: U.S. Census Bureau  
<https://project.wnyc.org/>

## EMPLOYMENT ADVERTISING

Since 2008, the Bank has monitored the number of help wanted ads posted in the Star Valley Independent. The number of help wanted ads is a valuable economic indicator as it provides a representation of the number of unfilled jobs that are available in the community and whether the demand for labor is trending upward or downward. The review is conducted the first full week in June. However, last year, the Bank decided to start averaging the end of May through the first 3 weeks in June to account for seasonal anomalies. For 2017, the number of help wanted ads from the end of May 2017 through the first 3 weeks of June 2017 was averaged together. The graph below shows the results for the last 9 years.

### Help Wanted Ads: Star Valley Independent



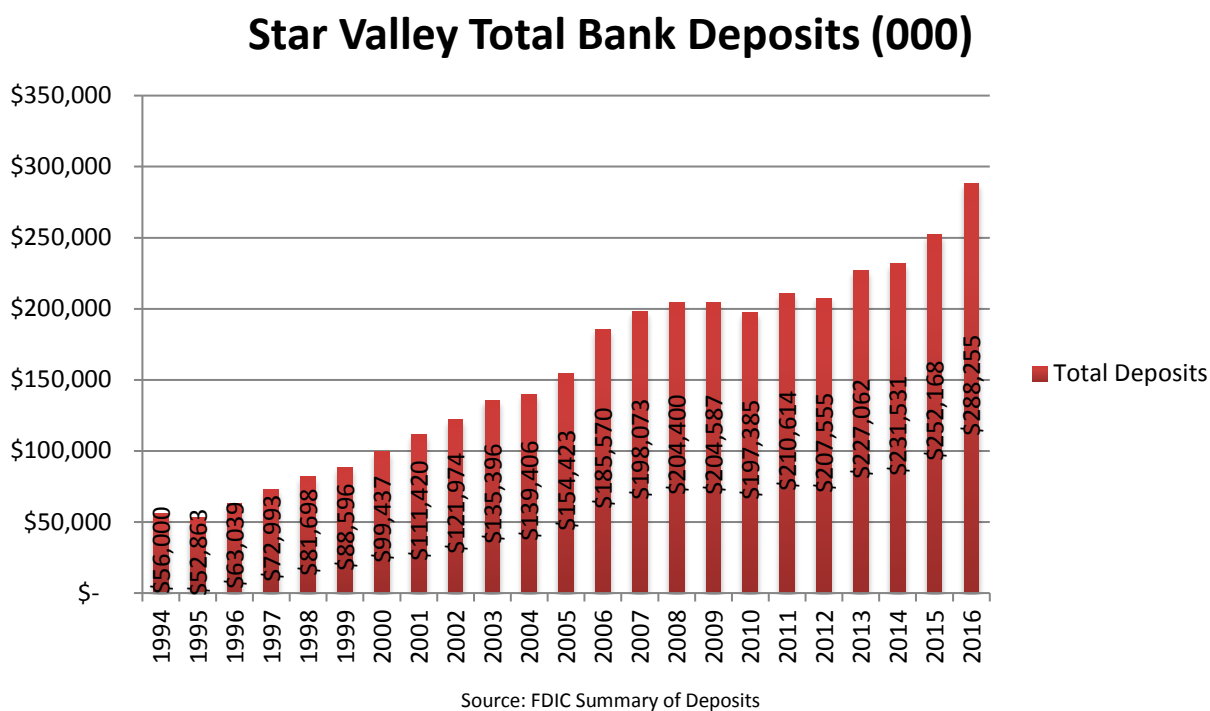
Source: Star Valley Independent Classifieds 2008-2017

The peak number of ads in the Star Valley Independent occurred 2008, with a total of 45 jobs offered. The next few years reflect the negative impacts of the Great Recession with only five jobs posted in 2011. Since 2014 there has been a significant increase in the help wanted advertisements. This year there were 32 total job listings in the newspaper, which is down from 43 in the 2016 advertisements. There were 7 jobs posted for Jackson - or 22% of the jobs posted in the 2017 sample. Some job postings in the 2017 sample were “for all departments”, meaning the advertisement was for more than one job with that employer. The reduction of 2017 job listings from 2016 is somewhat contradictory with the low unemployment numbers. With low unemployment, it would be expected that there would be more jobs unfilled as labor demand increases. This may be explained by either the market nearing equilibrium with labor demand equaling the supply, that area employers are using other sources including word of mouth and/or personal contact to fill employment positions, or employers are choosing not to

fill potential jobs due to cost necessary to meet legal requirements including ACA mandated health insurance.

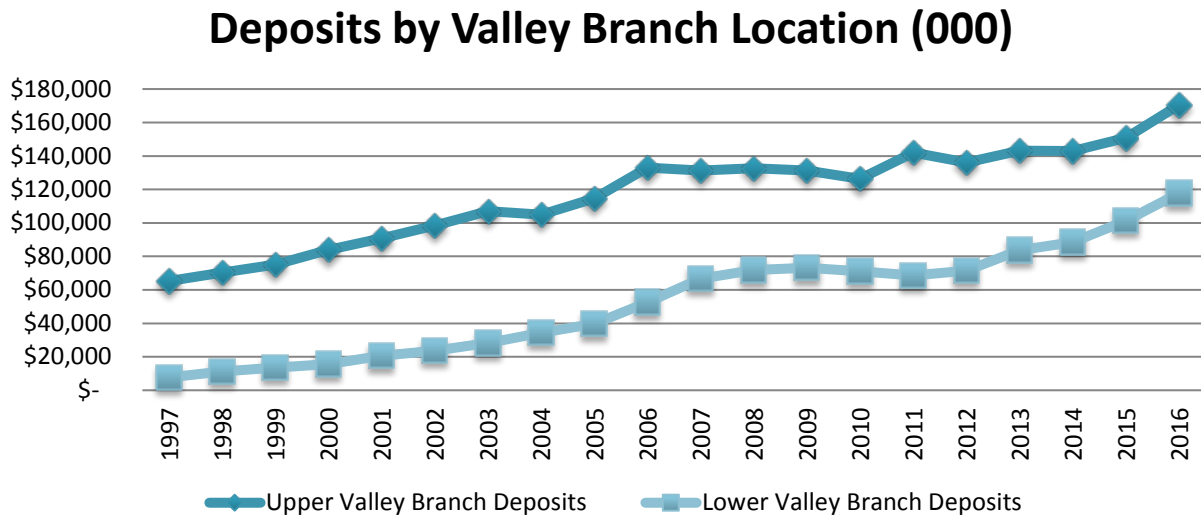
## MARKET LIQUIDITY

Liquidity, or deposits held in local financial institutions, is an approximation of general market growth and wealth. This is not a perfect measure of liquidity due to deposits from outside the market being held in local banks, or local money deposited into outside financial institutions, as well as market leakages including investments made through brokerage houses. Liquidity therefore, should be interpreted not as an indication of the total financial wealth of an area, but rather to understand general trends in market growth assuming consistent consumer and business investment preferences over time. The graph below shows the total bank deposits for Star Valley beginning in 1994. Since 1994, there have been 6 additional branches opened in Star Valley. The 4 local commercial banks report these numbers for each respective branch to the FDIC as of June 30 of each year and the FDIC then makes the information public in November of each year.



The above chart shows a steady increase in deposits until the Great Recession of 2008 after which deposits fell until 2012. Post 2012, total bank deposits rebounded quickly surpassing pre-recession numbers. Between 2015 and 2016, there was a 14.3% growth in bank deposits, the highest percent growth since 2006. This growth represents a growing population, as well as increased wealth – all positive signs of a growing economy.

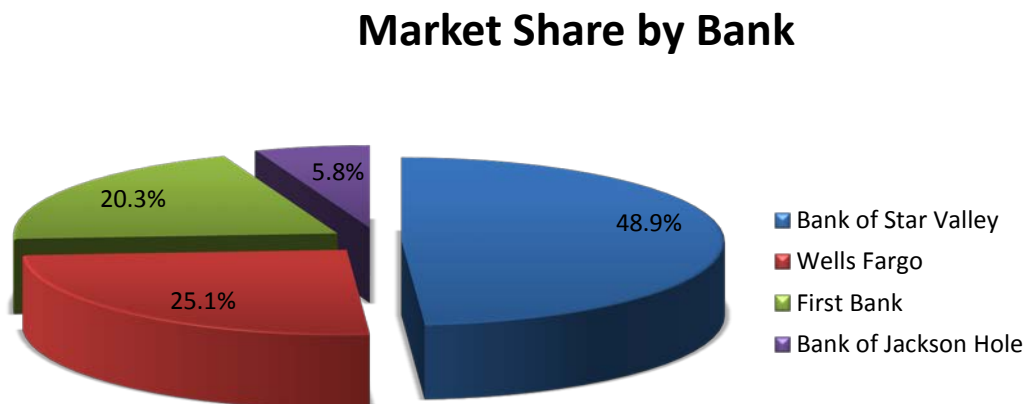
Due to the nature of the data, the bank deposits can be broken down by region within the market. The graph below shows the local deposits by location of upper or lower valley.



Source: FDIC Summary of Deposits

Historically, the upper valley bank branches have held more deposits than the lower valley branches. However, the spread between the lower valley and upper valley is narrowing. In 2011 the gap between the upper and lower valley aggregate deposits was \$73,450, and in 2016 it was \$36,087. This indicates that the lower valley is probably experiencing more general population growth or more affluent individuals moving into this area than the upper valley.

The following graph shows the market share percentage of each bank based on deposits, as of June 2016.



Source: FDIC Summary of Deposits



## COST OF LIVING

A state-wide cost of living report is prepared by EAD twice a year. The report is based on the cost of food, housing, apparel, transportation, and recreational activities. The index value of 100 is considered the state average. In this report EAD breaks Lincoln County into Lincoln County-Afton and Lincoln County-Kemmerer. The chart below compares Lincoln County-Afton, Lincoln County-Kemmerer, Teton, Sublette, and Uinta County.

Wyoming Comparative Cost of Living Index- 4th Qtr. 2016							
(Statewide Average=100)							
County	All Items	Food	Housing	Apparel	Trans.	Medical	Rec.
Lincoln-Afton	96	95	92	105	104	91	109
Lincoln-Kemmerer	91	89	86	86	104	94	102
Teton	152	118	195	127	105	100	108
Sublette	108	110	109	116	105	103	113
Uinta	91	91	87	86	100	107	92

Source: Department of Administration & Information Economic Analysis Division

This chart shows that Lincoln County is currently one of the cheaper places to live relative to the surrounding areas. Not surprisingly, there is a substantial difference between Afton and Kemmerer. Lincoln County -Afton does not represent the communities of Thayne, Star Valley Ranch, or Alpine in this data set. For employees with jobs in Teton County, Wyoming, Star Valley clearly remains a cost-effective alternative to living in Teton County – which boasts the highest cost-of-living index in Wyoming. This economic difference remains a strong catalyst underlying to population growth in Star Valley. As both Teton and Lincoln employees face relatively identical average wages, and the very high cost-of-living in Teton County, many Teton County employees have no alternative but to locate in the surrounding area, being Star Valley and Victor/Driggs.

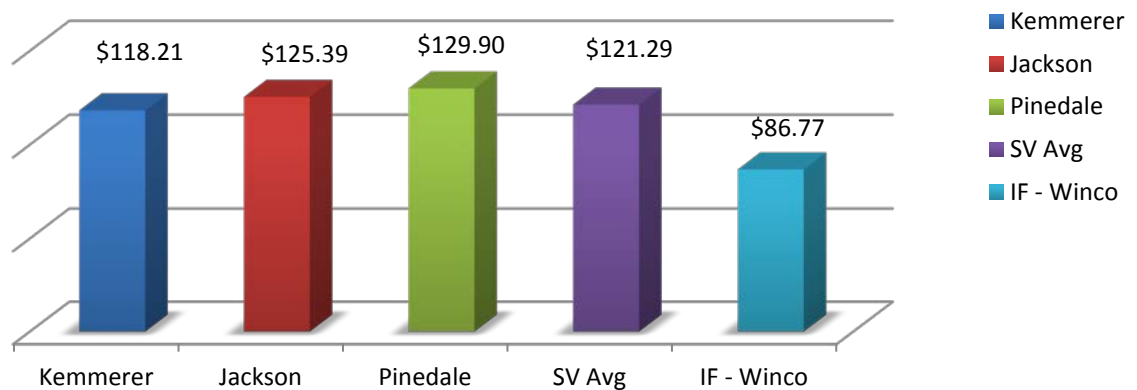
The chart below gives a historical perspective on the cost of living in Lincoln County-Afton. Before 2012, Lincoln County-Afton was at or above the state average for the cost of living. Since 2012, it has been beneath the average. Although it is still below the average, the cost of living did increase from 95 to 96 in the fourth quarter of 2016 and appears to be trending upward with time.

Change in Lincoln-Afton Cost of Living Index Between Jul. 2006 and Dec 2016							
Lincoln-Afton	All Items	Food	Housing	Apparel	Trans.	Medical	Rec.
4Q 5	102	95	107	89	99	94	106
4Q 6	104	98	110	88	101	104	100
4Q 7	100	97	104	86	99	100	96
4Q 8	101	96	104	95	100	91	110
4Q 9	101	96	102	96	100	91	110
4Q 10	102	103	101	104	100	98	112
4Q 11	100	96	100	98	99	96	112
4Q 12	94	98	85	102	100	96	112
4Q 13	95	97	88	107	102	96	107
4Q 14	92	94	86	96	99	93	107
4Q 15	95	99	87	99	104	92	112
4Q 16	96	95	92	105	104	91	109

Source: Department of Administration & Information Economic Analysis Division

To supplement the state's estimates for the cost of living, the Bank performs a study on the cost of a basket of groceries. An identical basket of goods (subject to branding among the stores) is compared among the three Star Valley grocery stores as well as grocery stores in Jackson, Pinedale, Kemmerer, and WinCo in Idaho Falls. The results of the study are shown below.

## Grocery Comparison

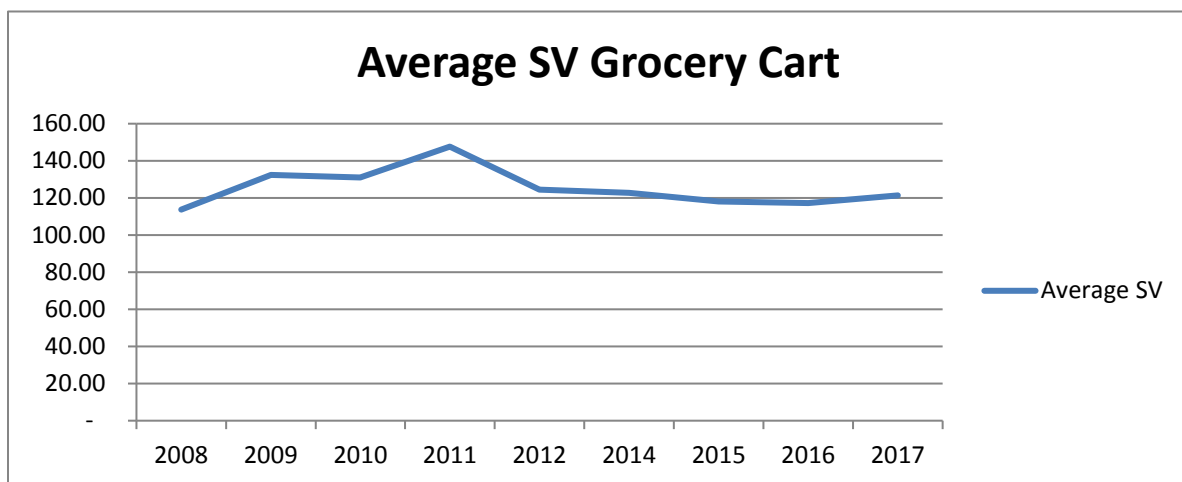


Idaho Falls- WinCo is the most economical option. The other stores are within \$10 of each other, with Star Valley in the middle of the sample. These findings support the recent EAD cost-of-living analysis as Jackson is 3.3% more expensive than the average Star Valley grocery store for the specific BOSV basket of goods.

A detailed list of the grocery cart and prices is listed below.

2017 Cost of a Basket of Grocery Items								
Grocery	Kemmerer	Jackson	Pinedale	SV Avg	IF - Winco	Alpine	Thayne	Afton
White Bread (Sara Lee)	2.73	3.49	3.47	2.99	2.78	1.99	3.49	3.49
Bread (Grandma's Sycamore)	2.97	2.99	3.35	2.76	2.48	2.50	3.29	2.50
Wheat Bread (Sara Lee)	3.19	3.49	3.49	3.16	1.78	2.50	3.49	3.49
Russet Potatoes (1 lb.)	0.24	0.39	0.24	0.34	0.19	0.40	0.22	0.40
Apples (Red Delicious) (1 lb)	1.19	0.99	0.97	1.29	0.78	1.49	0.89	1.49
Lettuce Head (Iceberg)	1.57	0.99	1.65	1.19	0.98	0.99	1.59	0.99
Boneless Skinless Chicken Breasts (1 lb.)	3.59	3.49	3.98	4.12	1.99	2.99	5.59	3.79
Ground Beef (1 lb. 80%)	3.98	3.59	2.98	3.99	4.38	4.49	4.79	2.69
Cereal (Frosted Shredded Wheat 18 oz.)	3.19	2.29	3.69	3.46	2.48	3.39	4.59	2.39
Cereal (Lucky Charms 11.5 oz.)	3.69	2.99	3.99	4.06	2.48	3.99	4.49	3.69
Cereal (Cheerios 12 oz.)	3.69	3.29	4.49	3.99	2.48	3.99	3.99	3.99
Ice Cream (WF 4 qt.)	5.99	5.79	8.29	7.46	5.58	7.49	7.89	6.99
Flour (WF All Purpose Bleached 10 lb.)	4.99	4.79	4.59	4.09	2.62	3.99	4.59	3.69
Sugar (WF 10 lb.)	7.19	7.29	5.99	5.52	3.98	5.59	5.99	4.99
Salt (WF)	0.79	0.59	0.89	0.78	0.50	0.85	0.89	0.59
Rice (Minute, White 28 oz.)	4.99	3.99	4.99	4.76	2.78	4.99	4.99	4.29
Milk (WF 2%)	2.5	3.29	3.09	2.62	1.07	2.49	2.69	2.69
Cheese (Cache Valley 2 lb. Sharp Cheddar)	8.99	10.49	10.99	9.82	5.56	8.99	10.99	9.49
Yogurt (Red Yoplait)	2.39	2.79	2.59	2.66	1.68	2.69	2.59	2.69
Eggs (WF 12 lg.)	1.39	1.79	1.39	1.22	0.88	1.19	1.29	1.19
Butter (WF)	3.69	3.29	3.99	3.59	2.78	3.89	3.39	3.49
Margarine (Imperial)	1.19	0.99	1.19	1.12	0.85	1.19	1.19	0.99
Cottage Cheese (WF 1 lb.)	2.23	2.99	2.23	2.16	1.41	1.79	2.99	1.69
Wheat Thin Crackers (9.1 oz)	3.65	2.79	3.65	3.42	2.16	2.99	3.69	3.59
Cut Green Beans (WF 1 can)	0.69	0.69	1.09	0.82	0.50	0.79	0.89	0.79
Toilet Paper (Charmin 12 Rolls)	9.29	16.99	9.89	8.39	6.97	7.49	7.99	9.69
Napkins (Vanity Fair 200 count)	3.76	5.99	5.39	6.81	3.56	7.28	6.68	6.48
Paper Towels (Bounty single)	2.39	2.39	2.39	2.39	1.87	2.39	2.39	2.39
Kleenex (184)	3.29	2.49	3.69	2.59	1.28	2.49	2.29	2.99
Detergent (Tide 100 fl. oz.)	12.49	11.99	15.29	13.49	11.97	12.69	15.29	12.49
Dish Detergent (Cascade 75 oz.)	6.29	5.99	5.99	6.22	5.97	6.49	6.59	5.59
<b>Total</b>	<b>\$118.21</b>	<b>\$125.39</b>	<b>\$129.90</b>	<b>\$121.29</b>	<b>\$86.77</b>	<b>\$116.47</b>	<b>\$131.71</b>	<b>\$115.70</b>

The Bank has used this same basket of goods for the economic study since 2008. The following graph shows the pricing trend for this list of items.



Interestingly, the price of the groceries does not peak until 2011; three years after the Great Recession hit the rest of the country. Since then, the price has almost been stagnant – which indicates a very stable relatively inflation free sector.

## INFLATION

The EAD cost-of-living index is likely the best source of inflation data within Wyoming. The inflation rate is estimated by using the percent change over one year in the price level for a standard basket of goods. EAD then estimates inflation for the entire state and five sub-regions within Wyoming. The Northwest region includes Big Horn, Hot Springs, Park, Teton, and Washakie counties. The Southwest region includes Lincoln-Kemmerer, Lincoln-Afton, Sublette, Sweetwater, and Uinta counties.

Star Valley lies within the EAD's Southwest region. However, due to the recreation and tourist activity and employment ties to Teton County, as well as the lack of mineral based activity which is the base economy of the Southwest region, the authors feel that Star Valley is more probable to mirror the Northwest region. To compensate for the above, an average of the Northwest and Southwest regions is used to attempt to appropriate a more reflective and correct measure for inflation in Star Valley.

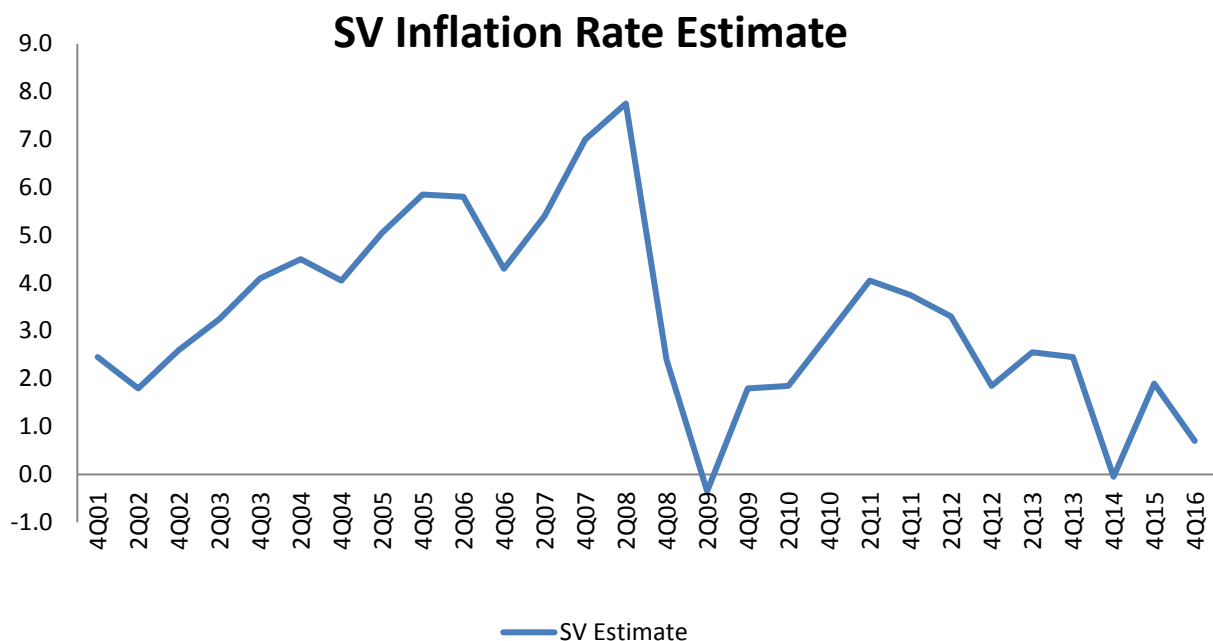
Inflation in 2015 was estimated to be 1.9% and in the 4<sup>th</sup> quarter 2016 it is estimated to be 0.7%.

Annual Inflation Rates by Region					
Quarter	U.S. CPI*	Statewide All Items	Northwest	Southwest	SV Estimate
4Q01	1.6	3.5	2.6	2.3	2.5
2Q02	1.1	2.5	2.2	1.4	1.8
4Q02	2.4	3.7	2.7	2.5	2.6
2Q03	2.1	2.6	3.0	3.5	3.3
4Q03	1.9	3.6	3.9	4.3	4.1
2Q04	3.3	4.9	4.4	4.6	4.5
4Q04	3.3	4.3	3.3	4.8	4.1
2Q05	2.5	4.5	3.5	6.6	5.1
4Q05	3.4	5.0	3.4	8.3	5.9
2Q06	4.3	5.6	4.0	7.6	5.8
4Q06	2.5	4.4	3.8	4.8	4.3
2Q07	2.7	4.7	4.6	6.2	5.4
4Q07	4.1	6.1	5.9	8.1	7.0
2Q08	5.0	7.9	7.4	8.1	7.8
4Q08	0.1	2.7	2.7	2.1	2.4
2Q09	-1.4	0.0	-0.5	-0.2	-0.4

4Q09	2.7	2.7	2.1	1.5	1.8
2Q10	1.1	1.9	2.1	1.6	1.9
4Q10	1.5	2.9	3.8	2.1	3.0
2Q11	3.6	4.5	4.5	3.6	4.1
4Q11	3.0	3.9	4.2	3.3	3.8
2Q12	1.7	2.4	3.8	2.8	3.3
4Q12	1.7	2.1	2.1	1.6	1.9
2Q13	1.8	3.1	2.3	2.8	2.6
4Q13	1.5	2.9	3.0	1.9	2.5
4Q14	0.8	1.1	0.8	-0.9	-0.1
4Q15	0.7	0.5	2.7	1.1	1.9
4Q16	2.1	0.6	1.9	-0.5	0.7

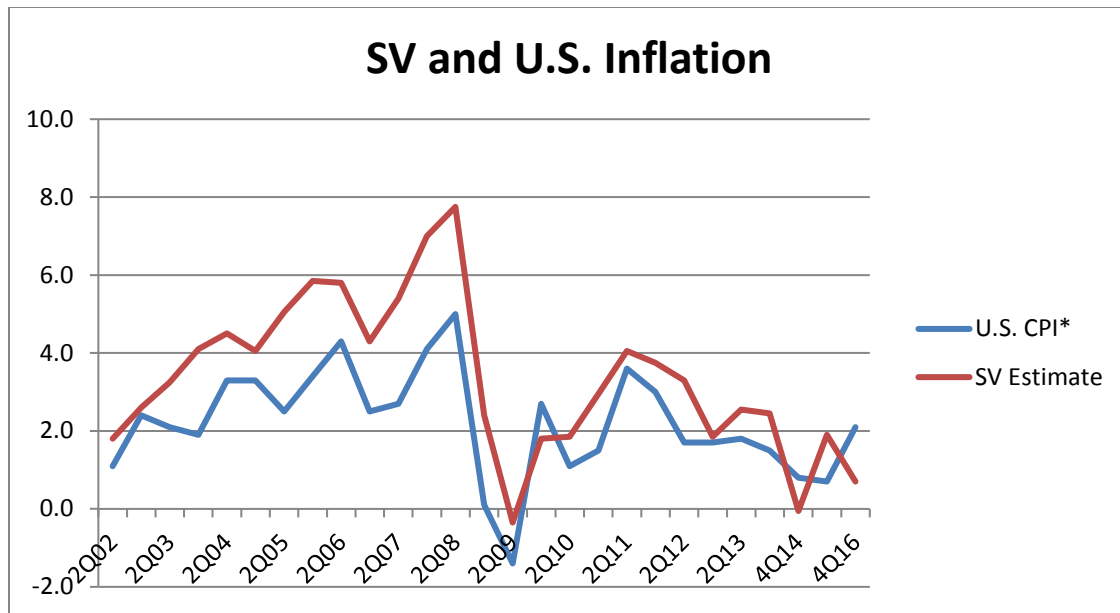
Source: Department of Administration & Information Economic Analysis Division

The above data is shown in graph form below. The graph clearly illustrates that overall inflation has trended downward from the 2008 peak. Interestingly, the U.S. CPI has decreased in 2017, from the 2.1% indicated in 4<sup>th</sup> quarter 2016, and is trending at approximately 1.7% (Year-to-date up to July 2017). An inflation rate of 2% is a stated objective of the Federal Reserve in executing its monetary policy objectives.



Source: Department of Administration & Information Economic Analysis Division

The Star Valley inflation rate, relative to the U.S. CPI is shown below:



Source: of Administration & Information Economic Analysis Division

Overall, Star Valley inflation has historically been higher than the national average. The most recent data indicates that Star Valley' inflation rate is trending lower, which is a positive for resident's due to the low per capital income level, high family unit size, and moderate-income levels. The one take-away is inflation in Star Valley is remaining below 2.00% and is appearing to be very stable in the under 2.0% range.

## STATE AND LOCAL TAX

Wyoming was ranked number thirteen in a national comparison of state tax revenue per capita at \$3,268 for 2016. This is the sum of the taxes paid to state and local governments, divided by the population – which on first glance would indicate Wyoming is a higher tax state. The rankings are shown below.

2016 State Tax Revenue			
State	Per Capita State Tax	Rank	% of Personal Income
District of Columbia	\$ 10,870	1	15.0%
North Dakota	\$ 4,894	3	8.8%
Vermont	\$ 4,941	2	10.1%
Alaska	\$ 1,405	51	2.5%
Connecticut	\$ 4,263	6	6.2%
Hawaii	\$ 4,843	4	10.0%
Minnesota	\$ 4,563	5	9.0%
New York	\$ 4,120	7	7.0%
Wyoming	\$ 3,268	13	5.8%
Massachusetts	\$ 4,005	8	6.4%

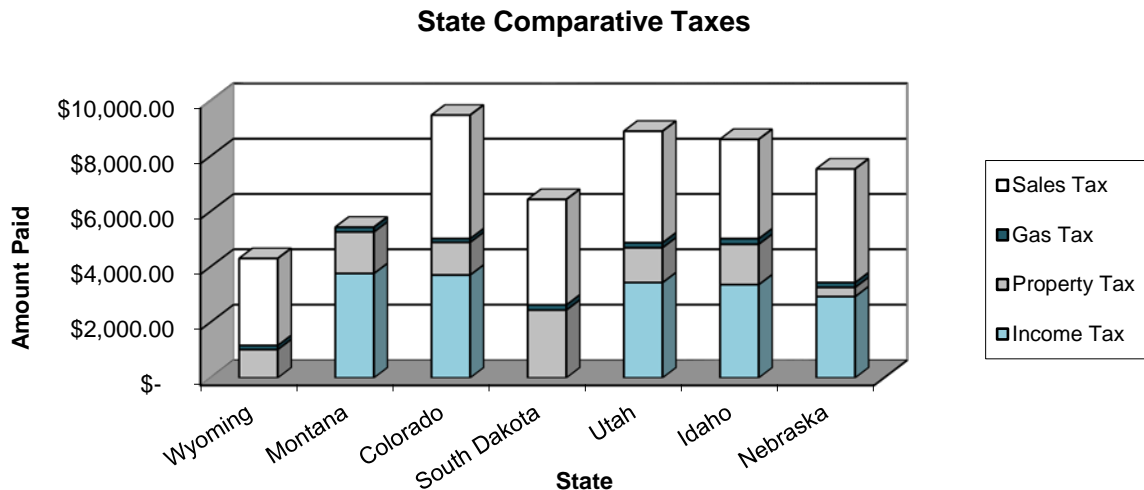
Source: Federation of Tax Administrators

State and local tax obligations have a direct impact on disposable income. A person earning a relatively lower wage in a low tax area may be as well off as a person earning a higher wage in a high tax area. While Wyoming shows a high per capita tax obligation, a large share of the actual taxes is paid by the mineral extraction industries through severance and sales tax. In fact, Wyoming residents currently enjoy a low relative tax burden which does have a direct positive impact on the financial health of each resident. An attempt was made by the authors to quantify the impact of Wyoming's low resident tax rates, relative to neighboring states.

The Bank created a relative tax comparison for a hypothetical family to illustrate the impact of Wyoming's lower residential tax rates. The comparative tax analysis is based upon a hypothetical family of four, earning \$80,000 (double wage earners living in Lincoln County), living in a \$200,000 house, and driving 15,000 miles a year. The comparison of state tax obligations for this hypothetical family is shown below:

Computed taxes for 2016 - Family of 4, \$80M Gross Income, \$200M House, 15,000 miles per year						
State	\$80M Income Tax	59.5M Consumption Sales Tax	625 Gallons Gasoline Tax/Gal.	Property Tax \$200M Res.	Comparative Tax	% of Wyoming
Idaho	\$ 3,354.99	\$ 3,587.85	\$ 206.25	\$ 1,460.00	\$ 8,609.09	200%
Colorado	\$ 3,704.00	\$ 4,462.50	\$ 137.50	\$ 1,180.00	\$ 9,484.00	221%
Montana	\$ 3,758.46	\$ -	\$ 173.44	\$ 1,500.00	\$ 5,431.90	126%
Nebraska	\$ 2,924.97	\$ 4,105.50	\$ 176.25	\$ 330.00	\$ 7,536.72	175%
South Dakota	\$ -	\$ 3,808.00	\$ 187.50	\$ 2,440.00	\$ 6,435.50	150%
Utah	\$ 3,430.00	\$ 4,028.15	\$ 183.81	\$ 1,260.00	\$ 8,901.96	207%
Wyoming	\$ -	\$ 3,129.70	\$ 150.00	\$ 1,020.00	\$ 4,299.70	100%

Source: api.org, tax-rates.org, taxfoundation.org



Source: Source: api.org, tax-rates.org, taxfoundation.org

The analysis shows that Wyoming is one of the best states to live in as far as a lower level of individual taxes are concerned. The state with the next lowest tax burden in the sample is Montana. But the tax burden for a Montanan in this scenario is still \$1,132 more than that of a Wyomingite. Wyoming is rated one of the best tax states by both Forbes and Kiplinger (Block) (Carlyle).

Wyoming natives have more disposable income because less of their money goes to taxes. Because of the lower tax burden, retired and high net-worth individuals are drawn to Wyoming to reduce their state tax expenditures (Block).

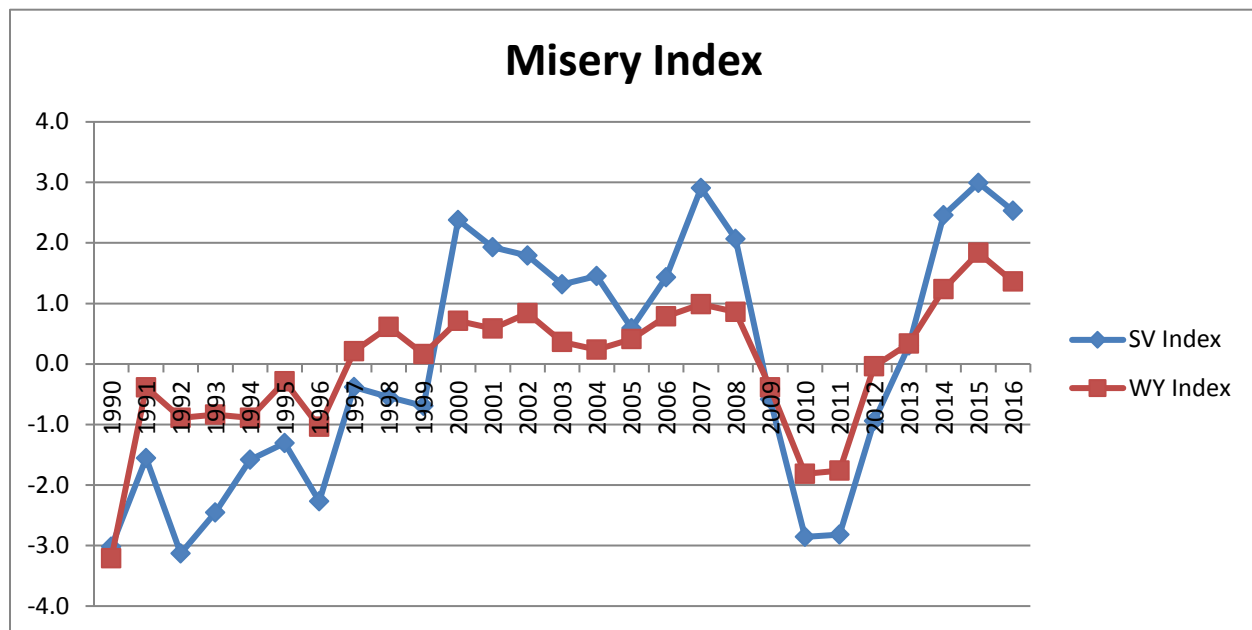
On an aggregate state wise basis, sales tax collection for Wyoming decreased by 2% in comparison to last year in the first quarter, with the largest drop in construction and retail trade. (Economic Summary: 1Q2017). On the other hand, due to the renewed energy exploration and production activity in 2017, Wyoming has experienced a year-over-year expansion of 2% in sales of equipment, supplies, and services in the mining sector; this is the first increase in over two years. The downturn in the mineral extraction industries is increasing pressure on the state government to raise personal tax obligations to fund Wyoming's state and local government spending, as is discussed later. Such changes will directly impact the Wyoming personal tax advantage indicated above.

## MISERY INDEX

The Bank created a Star Valley Misery Index to attempt to gauge the overall "economic attitude" of the Star Valley citizens. The Misery Index was created in late 1970's under the expectation that with lower unemployment levels and inflation rates, the population would



hold a more positive economic perspective and vice-versa; with higher unemployment and inflation rates, the population would tend to have a more negative outlook. Thus, the misery index is simply the sum of two components being the unemployment rate and the inflation rate. The Misery Index for Wyoming and Star Valley is graphed below.



This graph indicates that the average person in Star Valley should tend to have a positive economic outlook on life – but not quite as positive as that held in 2015. The Star Valley Misery Index surpassed 2008 levels in 2015, indicating a potentially strong consumer expectation for economic wellbeing. The authors, in 2015, were concerned that there may be excessive economic euphoria and expectation building that may lead to an excessive risk appetite for many residents. In 2016, Star Valley’s index dropped by 0.4 and Wyoming’s dropped by 0.5, showing a small dampening of potential euphoria.

## WYOMING ECONOMY

Gregory Nickerson, a reporter for WyoFile, noted that; “Despite Wyoming’s small population, it has a relatively robust state government that spends \$9.3 billion in state and federal dollars every two years.” (<http://www.wyofile.com/how-does-wyoming-spend-9-3-billion-every-two-years>). Further, the Wyoming Taxpayers Association and the Bank’s previous analysis indicate that the household tax burden for Wyoming households ranks the lowest in the nation. So, to support this robust state government, the state has developed a huge reliance, if not an addiction, on the mineral extraction industry. The mineral extraction industry supports 34% of state GDP and 8% of its employment. Mineral income makes up about two-thirds of State and Local Government total revenue.

As the Wyoming department of economic analysis reported in their July 2017 Economic Summary; “Amid the substantially depressed energy prices, the state’s pivotal industry, mining (including coal, oil, and gas extraction) suffered an annual employment contraction of 2,390 jobs or 11.7% in the first quarter.” With this contraction, most other sectors saw a decrease in employment with only private education and health services sector realizing an increase (Economic Summary: 1Q2017).

Relative to other states, Wyoming is ranked second in total energy production according to the the U.S. Energy Information Administration. Wyoming ranks 8<sup>th</sup> in crude oil production, 4<sup>th</sup> in natural gas production, and 1<sup>st</sup> in coal production. As to energy price sensitivity, the Wyoming Taxpayers Association indicates that for Wyoming state revenues:

Every \$1.00 per ton price change in coal results in a \$51 million change in state revenue;

Every \$1.00 per mcf change in natural gas results in a \$189 million change in state revenue; and,

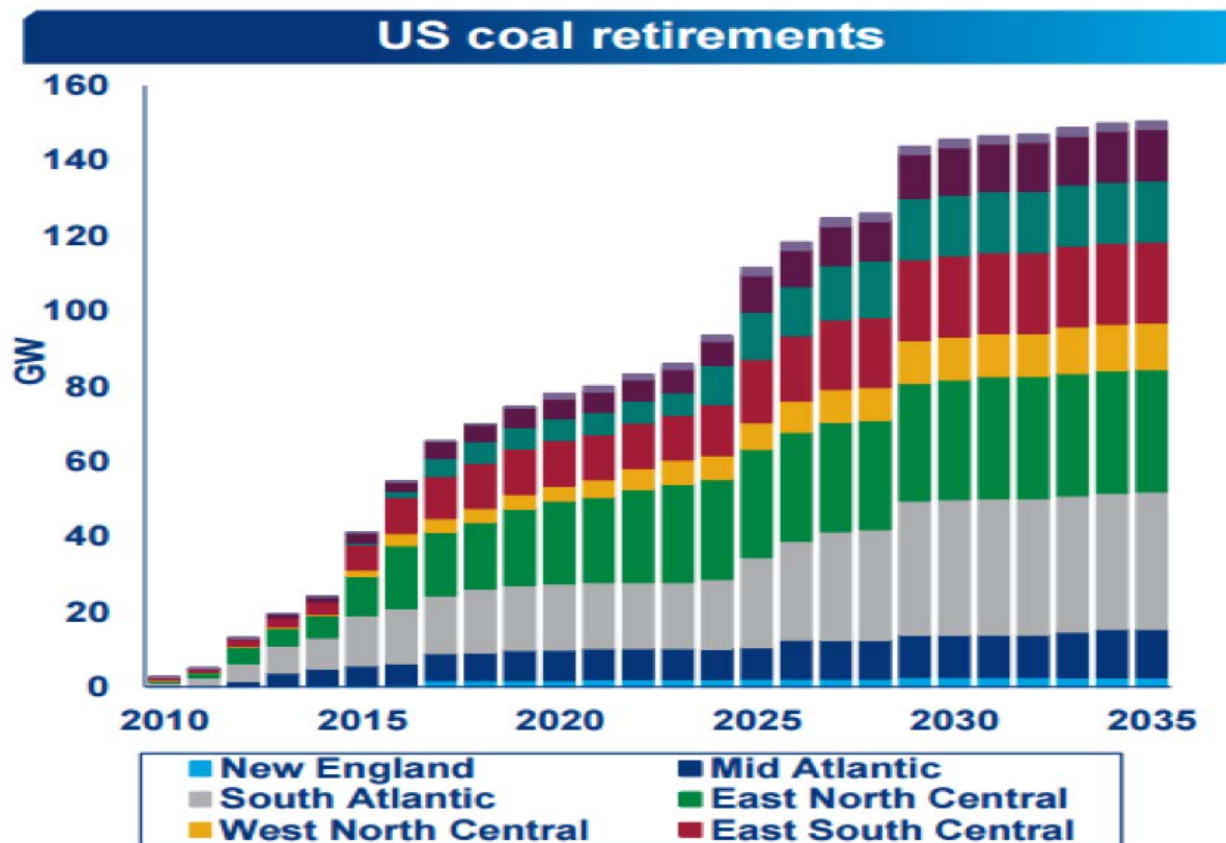
Every \$1.00 per bbl. change results in a \$9 million change in state revenue.

The reduction in energy prices and demand which has played out in the last few years are discussed in more detail below.

## COAL AND NATURAL GAS IMPACTS

The graph on the next page shows the estimated coal power plant closures on a U.S. national basis to-date and then closures which are projected to take place by 2035. The projected loss in future coal demand is overwhelming. The large loss of coal based power generation will directly harm the current Wyoming economy as Wyoming is the largest coal producing state in America.

“Wyoming, the origin of about 40% of the country’s coal, produced 72 million tons between April and June, the second quarter of the 2017 year. From January to March, mines had produced about 80 million ton; this year, miners dug about 20 percent more coal from beneath the Wyoming soil between April and June than they did the year before, an increase of 12.5 million tons” ([Casper Star Tribune](#), July 20, 2017, “Wyoming coal slides in Q@, but up 20 percent from last year”). The [Casper Star Tribune](#) article indicates that the recent increase in coal production is due to short-term temperature impacts, not caused by increased long-term generation demand. Critically, Wyoming Coal realized a spot price of \$11.62 per Power River Basin (RPB) 8800 BTU in July 2017. This spot price is a full \$1.63 or 12% below the January 2017 Wyoming CREG estimate of \$13.25 per RPB 8800 BTU. (Wyoming Insight, July 2017)

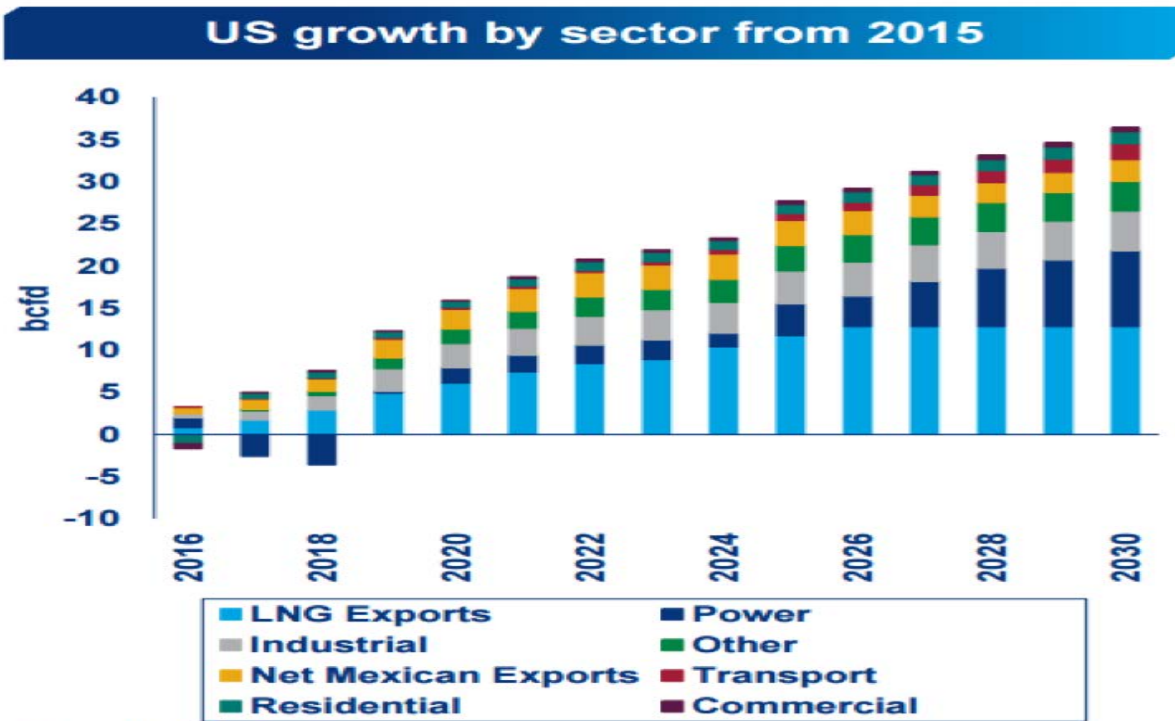


Source: TEA Solutions

As U.S. coal power plant retirements become a reality over time, there will be reduced demand for Wyoming coal, downward pressure on coal prices, and reduced mineral severance and related sales tax payments to the State of Wyoming.

If coal power generation is seeing reduced demand, one has to ask where the power generation is coming from to meet the power market. The following graph breaks down US generation from 2005 to present, and then forecasts the change in the energy production market up to 2035, based upon current market drivers.

The following graph illustrates the fall of coal as the largest source of power, largely being replaced by natural gas and renewables. Over the first 10 years of the forecast, the coal- and gas fired generation will battle for market share against the backdrop of increased 'clean generation' (renewables/hydro/nuclear) that will largely offset electricity demand growth. In the long-term, the graph further documents the expected continued decline of coal. (TEA Solutions)



Natural Gas will see increased demand from multiple sources, but with modern technology the production capacity is huge – limiting real long term upward pricing pressure from increased demand. The graph below shows natural gas growth by sector from 2015 providing a perspective on the long-term forecasts for natural gas demand. The largest growth sector is projected to be LNG exports as facilities are built to export U.S. natural gas to the world market. Directly behind the growth in LNG exports, is the growing demand in natural gas for U.S. power production.

Again, Wyoming is the 4<sup>th</sup> largest natural gas-producing state in the nation. Production takes place throughout the state, but most of Wyoming’s natural gas has come from field in the Great Green River Basin, basically Sublette as well as areas of Sweetwater, Uinta and Lincoln counties. Wyoming has 16 of the nation’s largest natural gas fields, including the Pinedale and Jonah fields that rank among the top 10. (U.S. Energy Information Administration, Wyoming State Profile and Energy Estimates, Dec 2016)

It is expected that in the mid to long-term, the Wyoming economy will be forced to become less coal dependent. However, the State will continue to see strong severance tax revenue from natural gas, oil, and other mineral extraction.

There is hope that renewable, particularly wind energy, may help fill some of the revenue which will likely be lost from coal taxes over time. California and Colorado, with many consumers and

renewable standards is talking with Wyoming about a potential wind generation. As reported in the winter 2017 issue of the Western Confluence, in an article entitled “Turbines on the Horizon”, there are political and environmental hurdles in such a joint state venture. For instance, ‘California worries about Wyoming’s less-green electrons and the loss of new renewable energy jobs, while Wyoming chafes under California’s oversight of a shared electricity grid and the prospect of more turbines on the horizon. But University of Wyoming research shows something else: wind could be a moneymaker in Wyoming too; enough to help diversify Wyoming’s struggling economy when there are few revenue sources.” Depending upon how this renewable energy source grows, it is calculated that wind could generate an estimated \$1.9 to \$2.1 billion in tax revenue in Wyoming over 20 years from property taxes, sales and use taxes from construction and operating activities, and the current wind production tax. (Western confluence, Winter 2017, Issue 7, TURBINES ON THE HORIZON).

The U.S. energy markets are clearly in a state of flux. In the end, all of this change in the energy market will have a direct impact on Wyoming State tax revenue, which directly impacts county, town, and other government related sectors.

## **CONSENSUS REVENUE ESTIMATING GROUP (CREG) SUMMARY**

The CREG is the official estimating body for revenues received by Wyoming State government. The 2017 forecast by CREG was modified in January 2017 to incorporate the continuing challenged energy price environment. At the beginning of the year, the General Fund revenues forecast was altered to reflect a \$21.1 million decrease and the Budget Reserve Account forecast was increased by \$17.2 million. CREG noted that “Although Wyoming coal continues to face headwinds, surface coal production appears to have recovered from the abrupt decline in the first quarter of 2016.” (Wyoming State Government Revenue Forecast Fiscal Year 2017 – Fiscal Year 2022).

In CREG’s latest release dated July 28, 2017 it is noted that: “Actual general fund revenue across all sources, including distributed capital gains and losses, is tracking \$143.6 million or 14.2 percent above pacing expectations for the year with two months of most revenue sources yet to be received. Without including capital gains and losses, general fund revenue is still outpacing projections by \$14.2 million or 1.4 percent on the strength of severance taxes and the “all other” category.

As to mineral severance taxes, through June 2017 total severance tax collections are 7.6 percent ahead of the January 2017 CREG forecast. Natural gas and oil prices are both above the CREG forecast, and natural gas rig counts have increased to 25 from 8 one year ago. Surface coal production appears to have substantially recovered from the dismal production experienced during the spring of 2016 are increasing year over year. All this news is good for Wyoming, at least in the short run, and total severance tax collections will exceed projections for fiscal year 2017.”

The matrix below shows the July 28, 2017 Wyoming CREG Revenue Update Summary, with actual collection numbers and variances to June 30, 2017. The Wyoming revenues are performing much better in 2017 than in 2016, when they were lagging \$47.5 million. The Budget Reserve was lagging \$66.5 million and school foundation was lagging \$14.7 million.

In 2016 the authors were very worried about the apparent decline in state revenues, and the trickle-down effects to the highly dependent local governmental entities. However, Wyoming has seen stabilization from the 2016 revenue declines, at least in the short term. This is very positive as it provides the Legislature time to carefully investigate and develop alternative long-term income sources, and removes some of the immediate pressure to cut governmental expenditures in the short run.

Fiscal Year 2017 Revenue Update Summary: Actual vs. January 2017 CREG Forecast

Revenue Sources	A	B	C	D	E	F	G
	CREG Forecast FY17 Total	Actual through June	Forecast through June (1)	Difference YTD \$	Actual YTD% of Total	Forecast YTD % of Total	YTD Pace
1 GF - Sales & Use Tax (2)	\$405,000,000	\$362,234,066	\$365,700,000	(\$3,465,934)	89.4%	90.3%	-0.9%
2 GF - PWMTF from dividends & interest (3), (4)	\$165,800,000	\$158,683,655	\$165,800,000	(\$7,116,345)	95.7%	100.0%	-4.3%
3 GF - PWMTF from capital gains (3), (4)	N/A	\$140,106,356	N/A	N/A	N/A	N/A	N/A
4 GF - Total PWMTF Income (3)	\$165,800,000	\$298,790,011	\$165,800,000	\$132,990,011	180.2%	100.0%	80.2%
5 GF - Pooled income from dividends & interest (3)	\$82,000,000	\$85,972,480	\$82,000,000	\$3,972,480	104.8%	100.0%	4.8%
6 GF - Pooled income from capital gains (losses) (3)	N/A	(\$10,747,723)	N/A	(\$10,747,723)	N/A	N/A	N/A
7 GF - Total Pooled Income (3)	\$82,000,000	\$75,224,757	\$82,000,000	(\$6,775,243)	91.7%	100.0%	-8.3%
8 GF - Severance Tax (5)	\$159,400,000	\$147,635,946	\$140,397,179	\$7,238,767	92.6%	88.1%	4.5%
9 GF - All Other (6)	\$200,300,000	\$212,266,019	\$198,700,000	\$13,566,019	106.0%	99.2%	6.8%
10 General Fund - Total (3), (4)	\$1,012,500,000	\$966,792,166	\$952,597,179	\$14,194,987	95.5%	94.1%	1.4%
11 General Fund - Total with capital gains (losses) (3), (4)	\$1,012,500,000	\$1,096,150,799	\$952,597,179	\$143,553,620	108.3%	94.1%	14.2%
12 BRA (from Severance Taxes)	\$112,400,000	\$88,842,906	\$74,365,358	\$14,477,548	79.0%	66.2%	12.9%
13 BRA (from FMRs)	\$191,900,000	\$201,291,424	\$138,500,000	\$62,791,424	104.9%	72.2%	32.7%
14 Budget Reserve Account - Total	\$304,300,000	\$290,134,330	\$212,865,358	\$77,268,972	95.3%	70.0%	25.4%
15 One Percent Severance Tax Account	\$82,400,000	\$74,716,129	\$67,743,019	\$6,973,110	90.7%	82.2%	8.5%
16 SFP CSPLF dividends & interest portion of investment income (3)	\$89,800,000	\$86,625,811	\$89,800,000	(\$3,174,189)	96.5%	100.0%	-3.5%
17 SFP CSPLF from capital gains (3)	N/A	\$68,311,831	N/A	N/A	N/A	N/A	N/A
18 Total SFP CSPLF from investment income (3)	\$89,800,000	\$154,937,642	\$89,800,000	\$65,137,642	172.5%	100.0%	72.5%
19 SFP FMRs	\$184,600,000	\$189,379,908	\$158,000,000	\$31,379,908	102.6%	85.6%	17.0%
20 School Foundation Program - Total (without capital gains) (3)	\$274,400,000	\$276,005,719	\$247,800,000	\$28,205,719	100.6%	90.3%	10.3%
21 School Foundation Program - Total (with capital gains) (3)	\$274,400,000	\$344,317,550	\$247,800,000	\$96,517,550	125.5%	90.3%	35.2%
22 SOCA (from Coal Lease Bonns)	\$115,300,000	\$115,287,115	\$115,300,000	(\$12,885)	100.0%	100.0%	0.0%
23 SOCA (from FMRs)	\$5,300,000	\$5,346,000	\$5,300,000	\$46,000	100.9%	100.0%	0.9%
24 School Capital Construction Account - Total	\$120,600,000	\$120,633,115	\$120,600,000	\$33,115	100.0%	100.0%	0.0%
25 Severance Taxes - Total	\$539,900,000	\$485,481,936	\$444,572,252	\$40,909,684	89.9%	82.3%	7.6%
26 Federal Mineral Royalties (without CLB) - Total	\$487,800,000	\$501,967,332	\$407,700,000	\$94,267,332	102.9%	83.6%	19.3%
27 Federal Mineral Royalties (including CLB) - Total	\$612,200,000	\$626,354,447	\$532,100,000	\$94,254,447	102.3%	86.9%	15.4%

(1) Year-to-date forecast is determined by using one of three methods: the pace of historical revenues is used for sales & use tax projections, a straight-line pace is applied to PWMTF and pooled income, while severance taxes and federal mineral royalties (FMRs) use a procedure relying on price and production weights, taking into account the impact of the repayment of sequestered, or withheld, FMRs.

(2) The Impact Assistance balance at the end of June 2017 was \$22,621.20; sales and use tax collections have been reduced by this amount. In addition, sales & use tax collections were adjusted in May 2017 by \$277,724.21 for the special fuel survey.

(3) Capital gains income from PWMTF, Pooled, and CSPLF investments are not currently part of the CREG projection process. Pursuant to the State Treasurer's interpretative policy, realized capital losses in the State Agency Pool are entered regularly in the state's accounting system as a reduction to the cash balance.

(4) There is no distinction between (i) interest and dividends and (ii) realized capital gains within the statutory term "earnings". The net effect this year for the PWMTF is the 2.5 percent of the spending policy amount (\$165,800,000) was exceeded by \$132,990,011. According to the spending policy, investment earnings in excess of 2.5 percent of the spending policy amount (\$165,800,000) and less than 5.0 percent of the spending policy amount (\$331,600,000) are distributed equally to the Strategic Investments and Projects Account (SIPA) and the Legislative Stabilization Reserve Account (LSRA). 2017 Wyoming Session Laws, Chapter 78 diverts \$4.3 million of the FY 2017 LSRA amount to the State Facilities Construction Account.

(5) The FY17 forecast of severance tax to the General Fund includes the mineral severance tax diversion adopted in 2016 Wyoming Session Laws, Chapter 31, Section 325. This severance tax diversion is estimated at \$6.7 million in FY17.

(6) The FY17 forecast of federal mineral royalties (FMRs) to the General Fund includes the FMR diversion adopted in 2016 Wyoming Session Laws, Chapter 31, Section 326. This FMR diversion is estimated at \$60.1 million in FY17.

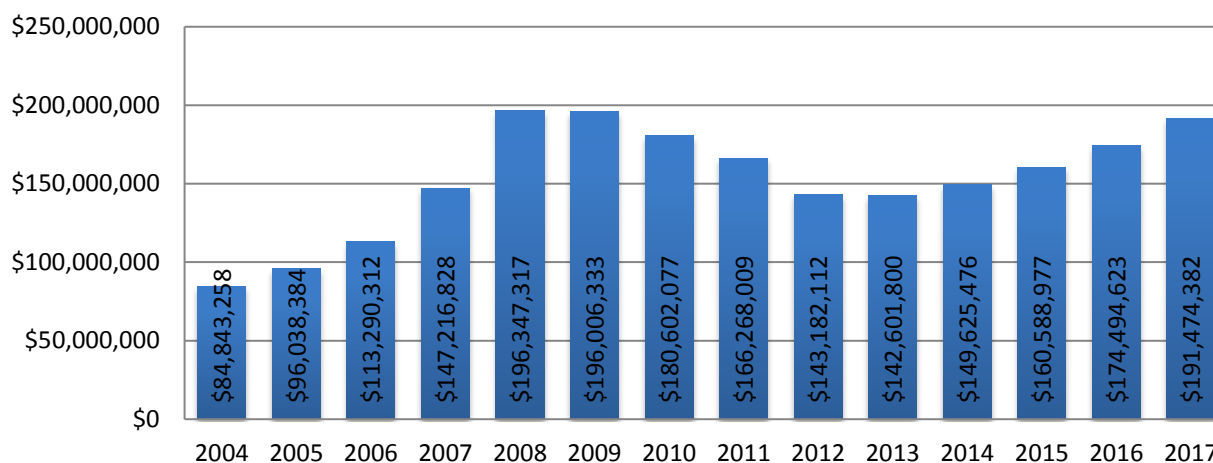


## REAL ESTATE

The assessed valuation of the North Lincoln County Hospital District covers all of Star Valley, Wyoming, but does not include Star Valley, Idaho. Since the District covers most of the area, it can be used to evaluate changes in real estate values over time. Assessed valuation is a lagging indicator because the valuation is performed by the Lincoln County Assessor's office based upon prior year sales information for nonagricultural property.

The 2017 assessed valuation for the hospital district was \$191,474,382. This valuation is a 9.73% increase from 2016, indicating a strong increase in real estate prices. The assessment has been increasing since 2013. As would be suspected, the peak was in 2008 at \$196,006,333. The bottom of the trough was in 2013 at \$142,601,800. The assessed valuation has yet not fully rebounded from the 2008 peak. The positive trend for the last three years is a clear indication that property values are increasing in aggregate.

### North Lincoln Hospital Valuation



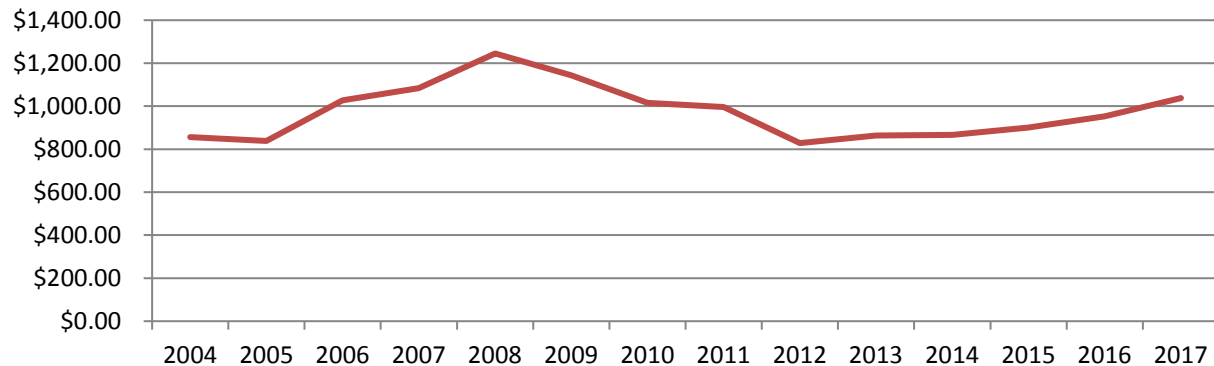
Source: Lincoln County Assessor

## PROPERTY TAXES FOR SELECT PROPERTIES

For over a decade, the Bank has tracked the property tax assessments for ten different properties. The purpose of this study is to document trends in specific real estate assessments in different areas of the Valley. Again, this is a lagging matrix. The graph below shows the trend in property tax assessments for the subject population from 2004 to 2017 with assessed valuation trending upward. While this is a trailing indicator, the trend clearly indicates that real estate prices are again increasing.



## Specific Property Taxes for Select Properties



## NEW HOME CONSTRUCTION

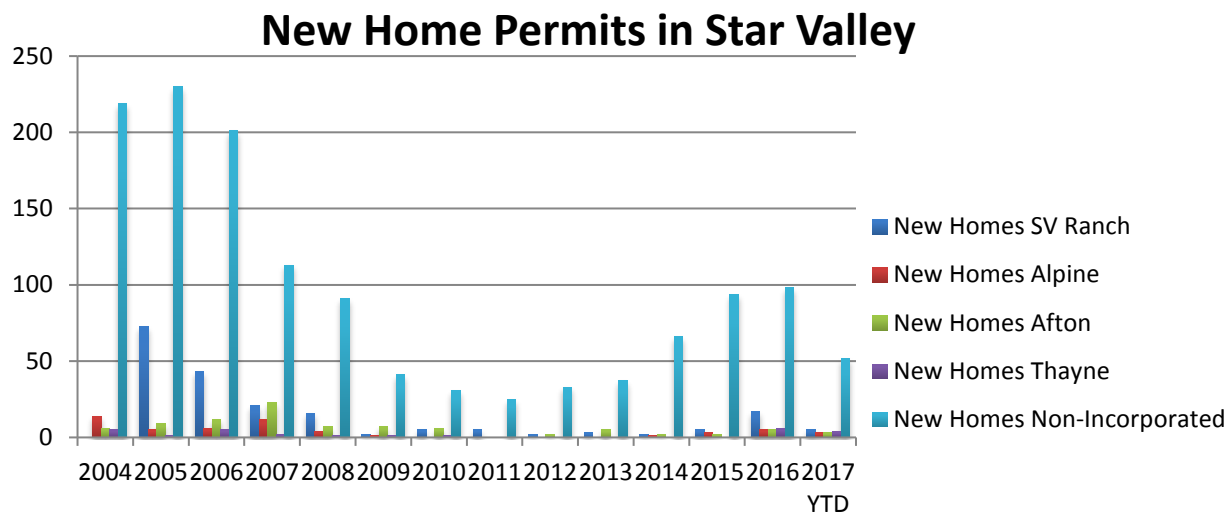
The construction of new homes is correlated to the health of the real estate market. Counties and towns require building permits for all new construction projects. The Lincoln County Planning and Zoning and the four incorporated towns in Star Valley are kind enough to provide the Bank with the new permit data to keep track of new home permits. Please be aware that the Idaho parts of Star Valley are not included in this analysis. There were 131 permits in 2016, the highest number since 2007. As of July 2017, 67 permits had been issued.

### Total Star Valley New Home Permits - To June 20, 2017

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017 YTD
<b>New Homes Non-Incorporated</b>	219	230	201	113	91	41	31	25	33	37	66	94	98	52
Total Homes Non-Incorporated	1674	1904	2105	2218	2309	2350	2381	2406	2439	2476	2542	2636	2734	2786
% Rate of Growth	15.1%	13.7%	10.6%	5.4%	4.1%	1.8%	1.3%	1.0%	1.4%	1.5%	2.7%	3.7%	3.7%	1.9%
<b>New Homes Afton</b>	6	9	12	23	7	7	6	0	2	5	2	2	5	3
Total Homes Afton	670	679	691	714	721	728	734	734	736	741	743	745	750	753
% Rate of Growth	0.9%	1.3%	1.8%	3.3%	1.0%	1.0%	0.8%	0.0%	0.3%	0.7%	0.3%	0.3%	0.7%	0.4%
<b>New Homes Thayne</b>	5	1	5	2	1	1	1	0	0	0	0	0	6	4
Total Homes Thayne	129	130	135	137	138	139	140	140	140	140	140	140	146	150
% Rate of Growth	4.0%	0.8%	3.8%	1.5%	0.7%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
<b>New Homes Alpine</b>	14	5	6	12	4	1	0	0	0	0	1	3	5	3
Total Homes Alpine	302	307	313	325	329	330	330	330	330	330	331	334	339	342
% Rate of Growth	4.9%	1.7%	2.0%	3.8%	1.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.3%	0.9%	1.5%	0.9%
<b>New Homes SV Ranch</b>		73	43	21	16	2	5	5	2	3	2	5	17	5
Total Homes SV Ranch	727	800	873	916	937	953	958	963	965	968	970	975	992	997
% Rate of Growth		10.0%	5.4%	2.4%	1.7%	0.2%	0.5%	0.5%	0.2%	0.3%	0.2%	0.5%	1.7%	0.5%
<b>Total New Homes</b>	244	318	267	171	119	52	43	30	37	45	71	104	131	67
Total Homes	3502	3820	4117	4310	4434	4500	4543	4573	4610	4655	4726	4830	4961	5028
% Growth Rate in SV	9.6%	9.1%	7.0%	4.2%	2.8%	1.2%	1.0%	0.7%	0.8%	1.0%	1.5%	2.2%	2.7%	1.4%

Source: Lincoln County Planning & Zoning, Town of Afton, Town of Alpine, Town of Star Valley Ranch, Town of Thayne

The graph of new home permits by area, shown below, clearly illustrates the upward trend in new home construction since 2011, with the majority of new home construction, or 78.0% being in non-incorporated areas, and the towns realizing 22.0% of new construction.

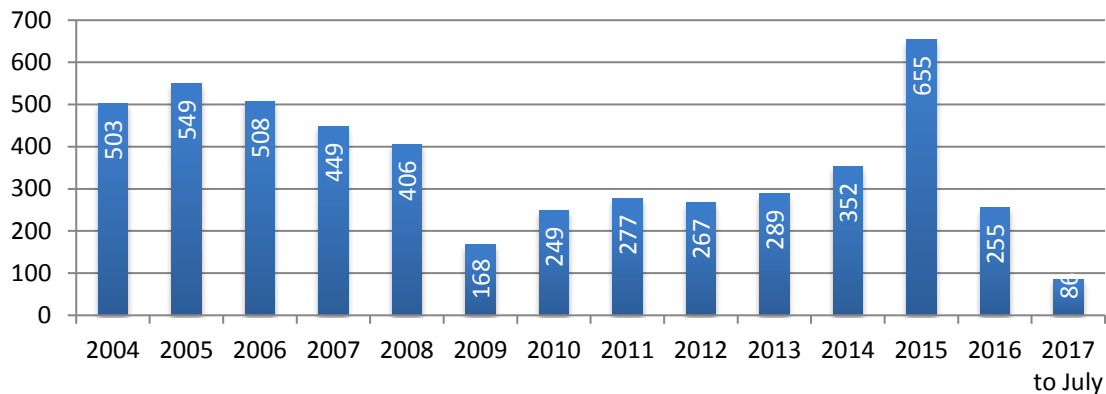


Source: Lincoln County Planning & Zoning, Town of Afton, Town of Alpine, Town of Star Valley Ranch, Town of Thayne

## UTILITY CONNECTIONS

In addition to building permits, new utility service connections are another indicator of real estate activity. The local energy cooperative, Lower Valley Energy, serves Star Valley, Teton County, Swan Valley, and Bondurant. Because they serve a larger area than this economic analysis covers, the numbers do not directly correlate with the North Lincoln County new home permits. However, the data is valuable in identifying regional market activity. 2016 exhibited generally weaker connection activity in comparison to the recent peak of 2015. 2017 also looks to be a slower year for new connections when comparing the months of January through May numbers of previous years. This indicates that while regional connection activity is positive, perhaps the rate of growth in new construction has peaked.

## Total New Services Connected



Source: Lower Valley Energy

## REAL ESTATE TRANSACTION SUMMARY

At the transaction level, buyers and sellers determine the fair market value of assets as they go through the negotiation process and money changes hands. These sale transactions create the most telling real estate market value indicators.

Jackson Hole Real Estate Associates (JHRA) monitors the Multiple Listing Services, (MLS), a realtor's data base, and has done a review of Star Valley real estate transaction. The Bank also reviewed and verified the JHRA data, using the MLS, and documented that the statistics JHRA are very accurate.

The findings of both reviews are that the overall number of transactions and market values are increasing. During 2017, "The number of transactions increased approximately 28%, and total dollar volume increased approximately 51%" [in the single-family segment]. (Jackson Hole Market Report 2017). The midyear Star Valley based report by JHRA stated that, "In the first half of 2016, average and median sales prices increased as inventory continued to decrease" (Star Valley Real Estate Market Report Mid-Year 2016). The JHRA report indicates a 13.0% increase in the average sale price and 4.0% increase in the average median sale price in 2017 over 2016 (Star Valley Real Estate Market Report Mid-Year 2017). The excellent work of JHRA highlighted a number of specific real estate sectors, of which two are of great interest. These are:

Single Family Residential: JHRA noted that "Single family transactions increased 28% compared to mid-year 2016". There were 82 transactions in the first half of 2016 and 105 in the first half of 2017. Total dollar volume increased substantially, up 51%. However, the average sales prices increased by 18% and median sales prices by 8.5%" (Star Valley Real Estate Market Report Mid-Year 2017).

Vacant Land: JHRA noted that “Building sites experienced a 58% increase in number of transactions. This contributed to a 99% increase in total dollar volume, from \$6,198,945 in the first half of 2016 to \$12,348,423 in the first half of 2017. The report indicates that there were 116 transactions, with an average sales price of \$106,452 in the first half of 2017, an increase of 25.0%. The median sale price for the first half of 2017 for vacant lands was \$50,000 (Star Valley Real Estate Market Report Mid-Year 2017).

In Star Valley, many of the sales transactions are documented through the Multiple Listing Service (MLS). Even though, more private party sales are occurring that are not reported in MLS, the MLS numbers adequately represent the real estate activity in Star Valley to evaluate trends.

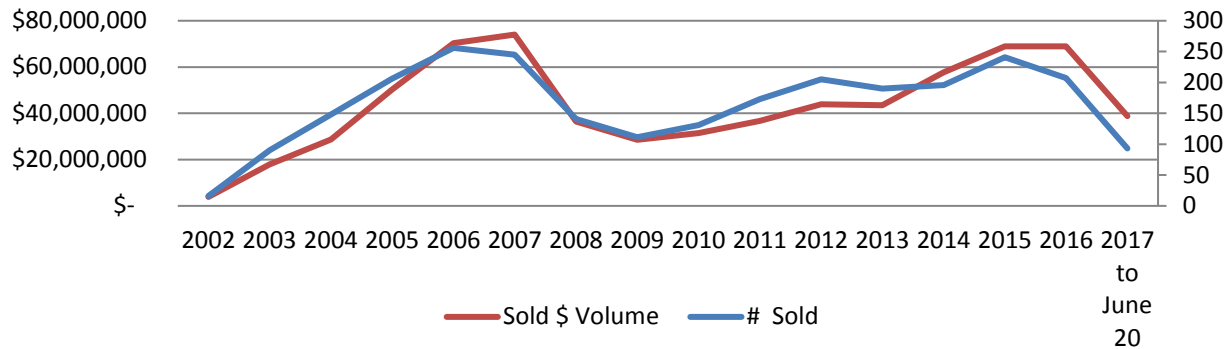
## **RESIDENTIAL HOME TRANSACTIONS**

Single-family home sales are the main driver in the more rural Star Valley real estate market. Buying a home is likely the biggest purchase many families will undertake during their life and often represents a significant portion of a person’s wealth.

The graph below shows the total number of sales and the total value of the residential home sales in Star Valley since 2002, based upon data from the MLS. There was a steady increase in both the number of sales and the dollar volume the first five years of the graph. As one would expect, a sharp decline resulted from the Great Recession.

While 2017 data represent only the first 6 months of the year, there was a decline in number of homes sold between 2015 and year-end 2016. There were 116 homes that were sold in the first 6 months of 2017 with a sold volume of \$12,348,423; relative to 73 homes and a sold volume of \$6,198,945 for the same period in 2016. Although, in 2016, there was a decrease of 34 homes sold there was only an \$8,751 difference in the dollar volume. Clearly, house prices are increasing substantially. This year, mid-year 2017, the average price of a home is \$410,360 compared to 2016’s mid-year average sale price of \$346,019; that’s an increase of 18.59%.

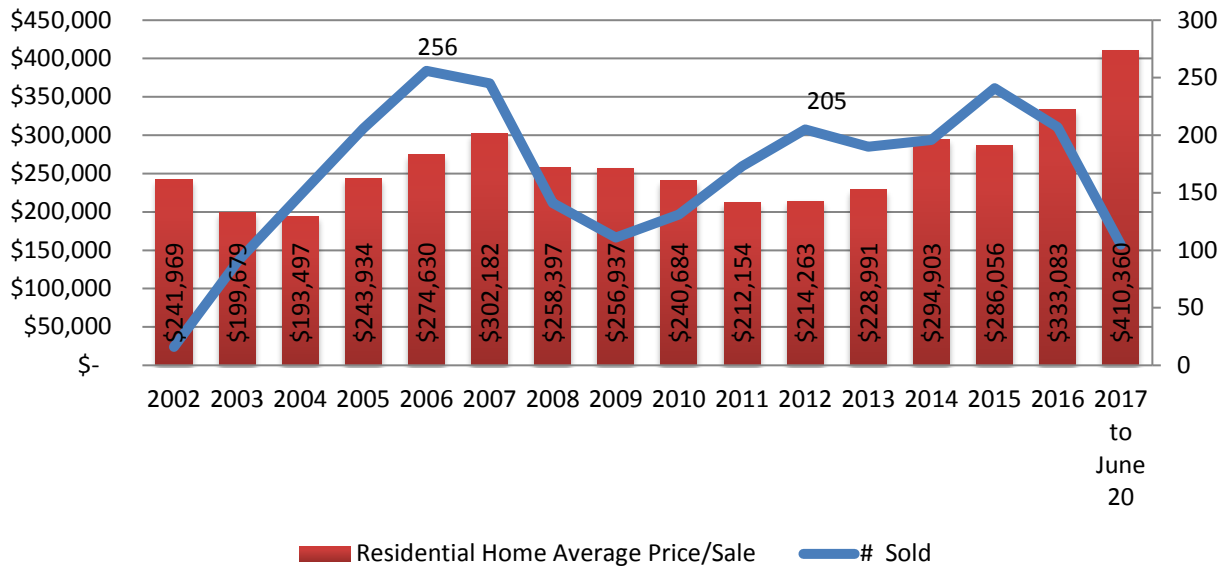
## Residential Home Sales



This indicates that there are more high dollar homes being sold that are impacting the average price. The median sale price for a home as \$264,500 for the first 6 months in 2016, and the median price was \$287,000 for the same period 2017. This represents an 8.5% increase, or 17% annualized, year-over-year. In 2016, there were seven homes that sold for \$100,000 or less and this year, mid-year 2017, there were zero. For homes prices at \$100,000 to \$200,000, there was 53 sold in the first six months of 2016, dropping over 50% to only 23 during the same period of 2017. The inventory of moderately priced housing is decreasing, and therefore there will be increased pricing pressure for housing in this area, constrained by the ability of individuals to afford the purchase of a house. This is concerning to the authors because that's going to critically impact moderate income individuals who are interested in buying a home. The reality is that currently, there just isn't any affordable housing for lower income individuals in the market.

The average home price level for the residential market is calculated by dividing the total sales volume by the total number of sales. This figure is valuable because it shows supply and demand trends. The general trend is when demand increases and supply decreases, the average price increases and vice versa. Star Valley's average price per sale is illustrated below. Readers should use caution when analyzing the graph because the average can easily be altered with a few large sales. The average price per house for the first six months in 2017 has increased by 16% in comparison to the same period in 2016. For the first six months of 2017, the numbers look strong; mid-year 2016 there were 82 homes sold compared to 105 sold mid-year 2017.

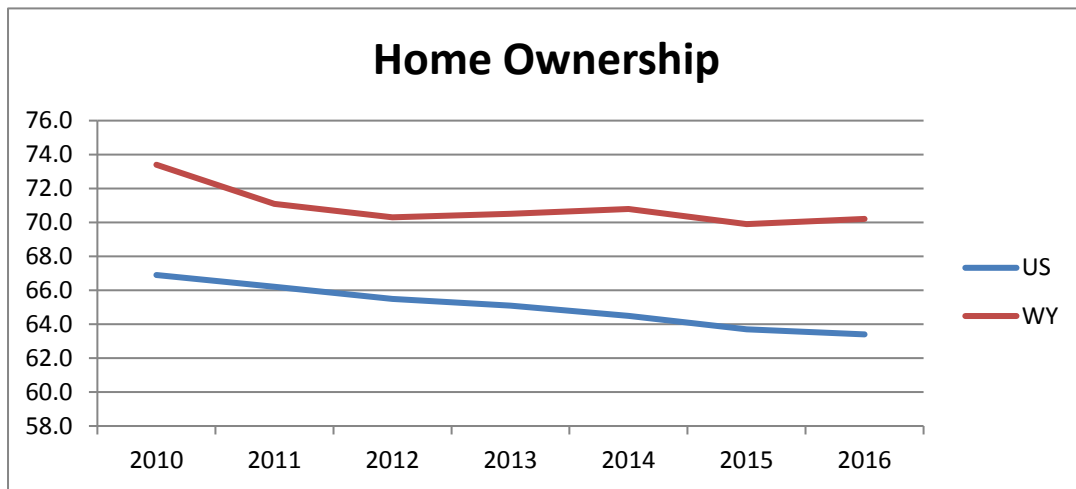
## Residential Home Sales



Source: Jackson Hole Real Estate Associates and Multiple Listing Services

In 2012, the average sale price began to trend upward. However, in 2015 the average price decreased by 3% but increased again by 16% in 2016, causing a slight decrease in the amount sold. For mid-year 2017, there were 105 residential homes sold at an average price of \$410,360 which is an increase of 28% for homes sold and an 18.59% increase in the average home price in 2017 over 2016.

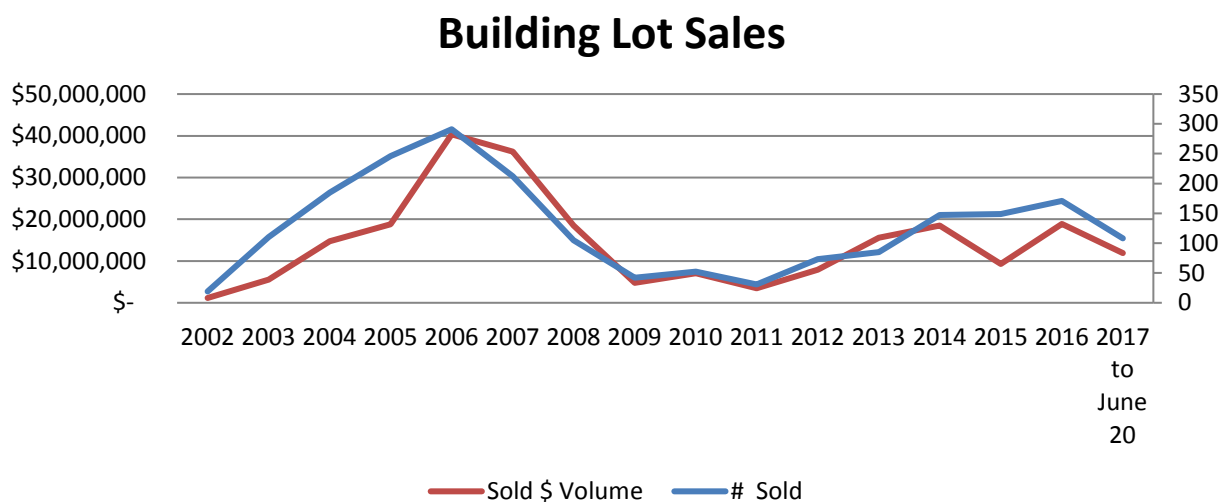
Home ownership in the United States and in Wyoming has been gradually decreasing since 2010 as shown in the graph below. The fact that Star Valley home sales have increased significantly is impressive in comparison to the U.S. and Wyoming trends.



Source: Federal Reserve Economic Data

## BUILDING LOT TRANSACTIONS

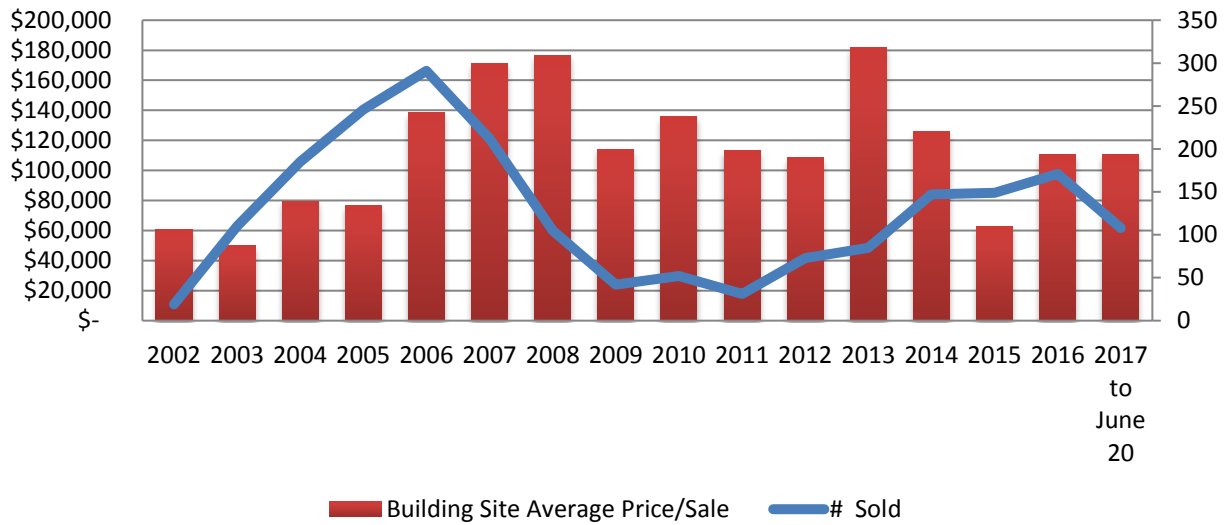
The total number of sales and the total value of the building lots in the Star Valley area for over ten years are illustrated below. Building lots of all sizes are included in the figures, and 2017 data represent only the first 6 months of activity. Building lot sales peaked in the number of lots sold back in 2006 at 291 and decreased sharply until 2009. In more recent years, the trend is clearly indicating an increasing trend in number of lot sales. The building site sales have shown a strong start in 2017. In the first half of 2016, there were 72 building site sales. In the same period in 2017, there are 108, or a 50% increase.



Source: Jackson Hole Real Estate Associates

Like the residential sales, the average price per sale for building lots is a significant real estate market indicator. In 2015, the average residential sale price dropped significantly by 50%. However, with 2016 and 2017 data, 2015 is an anomaly representing more sales of less expensive lots which drop the average sale price. The overall trend has been increases in the number of sites sold, with average price showing a great degree of consistency. Like the average price for homes, the average price for building sites in 2016 has grown in comparison to 2015. To be specific, the first half of 2016 was 21.67% higher than the first half of 2015. This increasing trend has continued to mid-year 2017, with the number of building lots sold up 58.9% and an average price increase of 25.36%, from the first half of 2016.

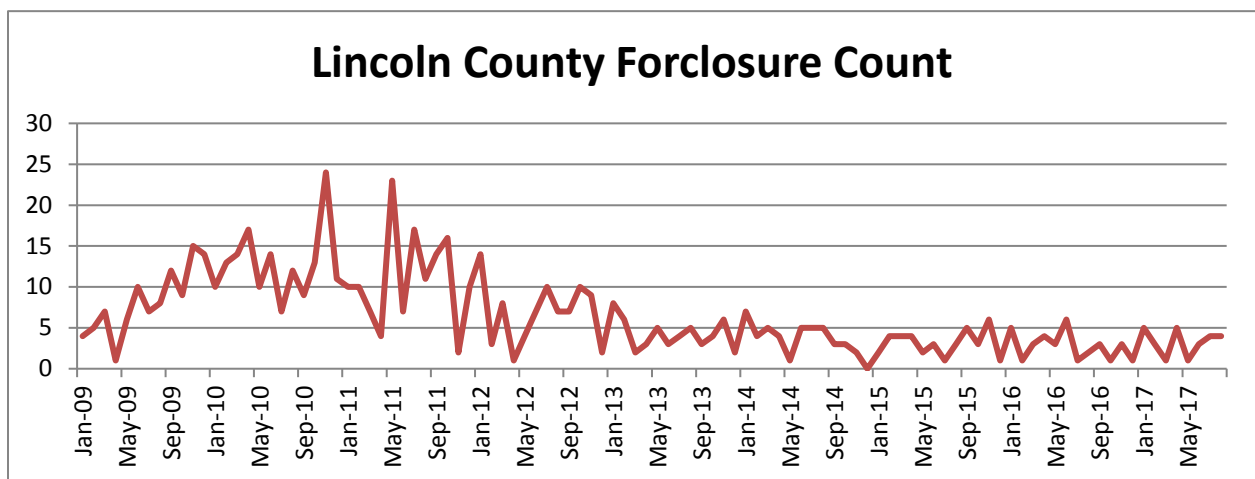
## Building Site Average Price/Sale



Source: Jackson Hole Real Estate Associates and Multiple Listing Services

## FORECLOSURE ACTIVITY

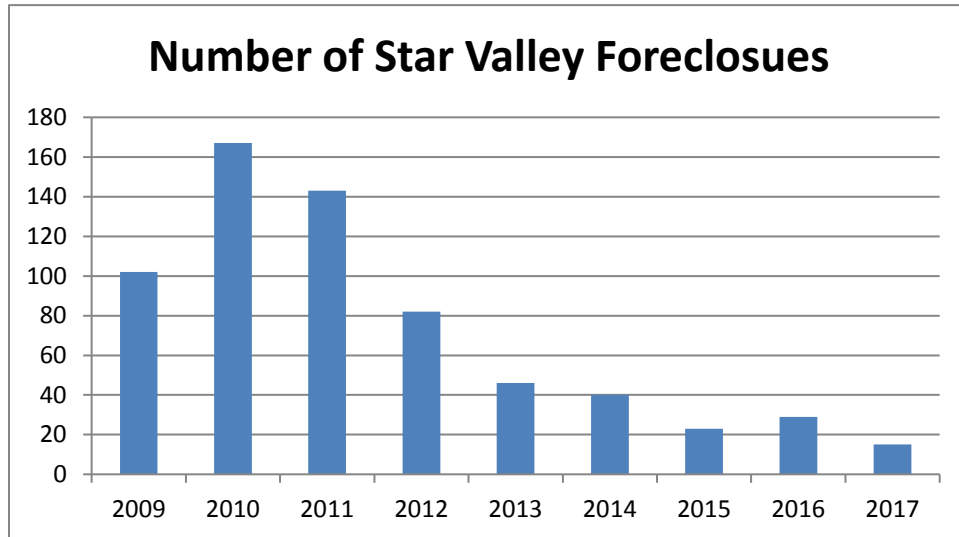
Foreclosure activity has an inverse relationship with the real estate market activity and general economic activity. Foreclosures generally happen due to job losses or difficult economic times, especially during times of depressed real estate values. Foreclosed homes usually sell for less than comparable homes not in foreclosure. These two factors cause the downward pressure on real estate activity and the general economic activity. The Bank has been able to monitor the published foreclosures since 2009 using Lincoln County's newspaper publishing's. The number of foreclosures has significantly decreased since the Great Recession.



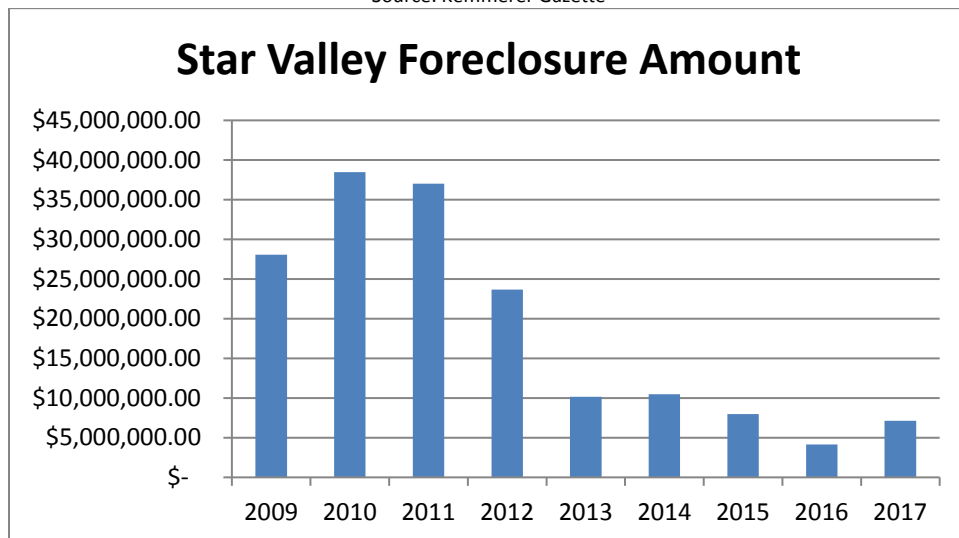
Source: Kemmerer Gazette



In Star Valley up to July 2017, the number of foreclosures is 29. This compares to 42 for the entire year of 2016.

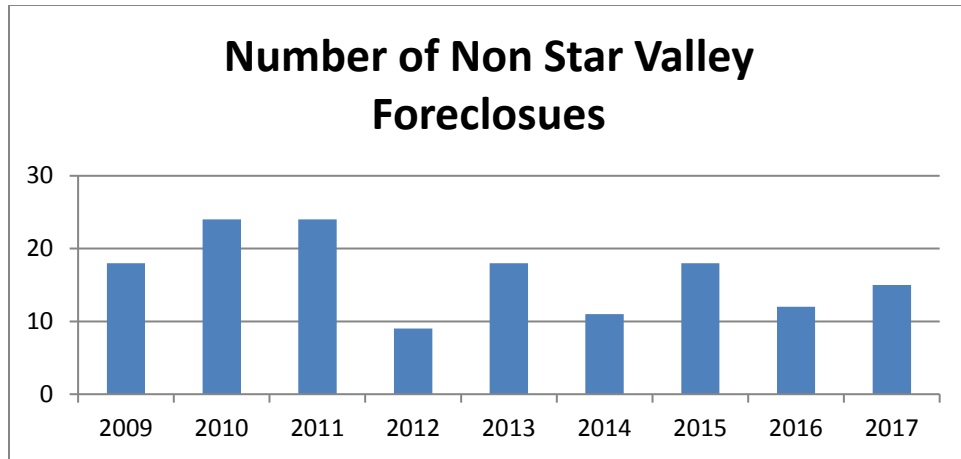


Source: Kemmerer Gazette

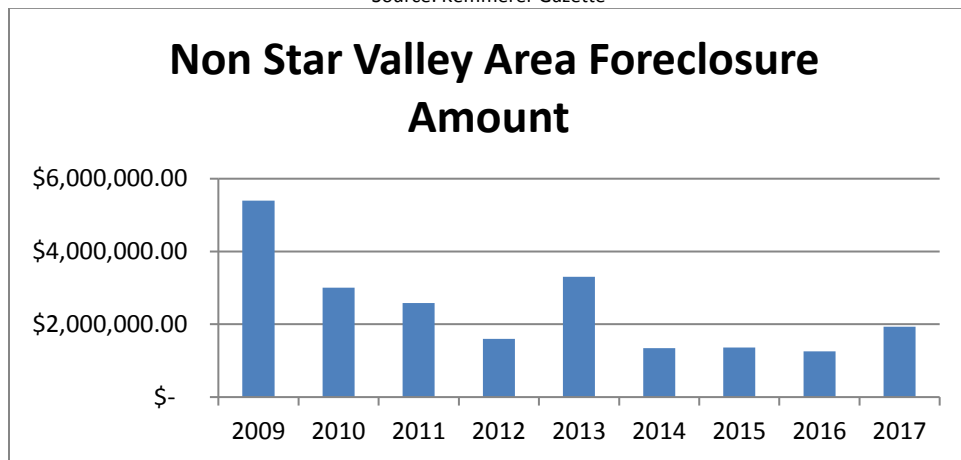


Source: Kemmerer Gazette

Due to recent changes in the coal and oil industries, the authors felt it was notable to add the number of Lincoln County – Non-Star Valley foreclosures. The number of foreclosures in 2015 for Non-Star Valley hit a new peak since the Great Recession. Although, the number of foreclosures in 2017 of 29 to date is less than the 2015 totals of 41, it still increased from 2016's 42 foreclosures. Clearly, the depressed mineral sector of the economy has had a negative impact on South Lincoln County and the impacts have not subsided as the number and dollar amount of foreclosures in this area for the first 6 months of 2017 are greater than those of the entire year 2016.



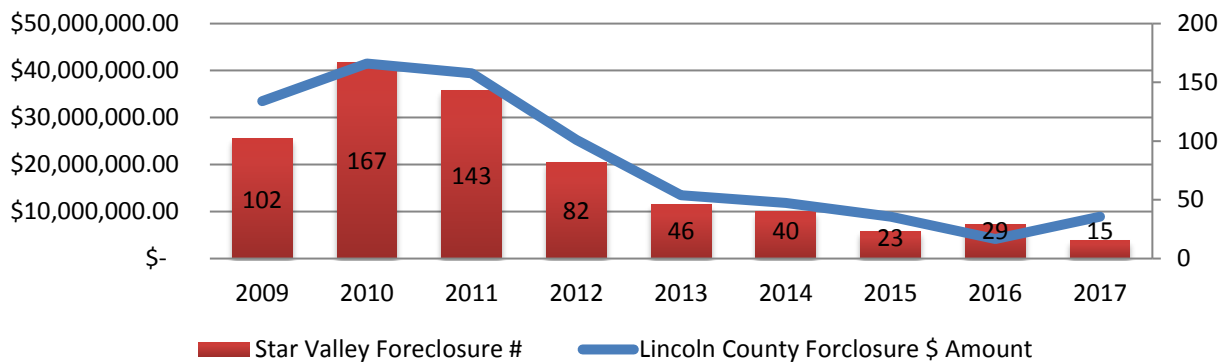
Source: Kemmerer Gazette



Source: Kemmerer Gazette

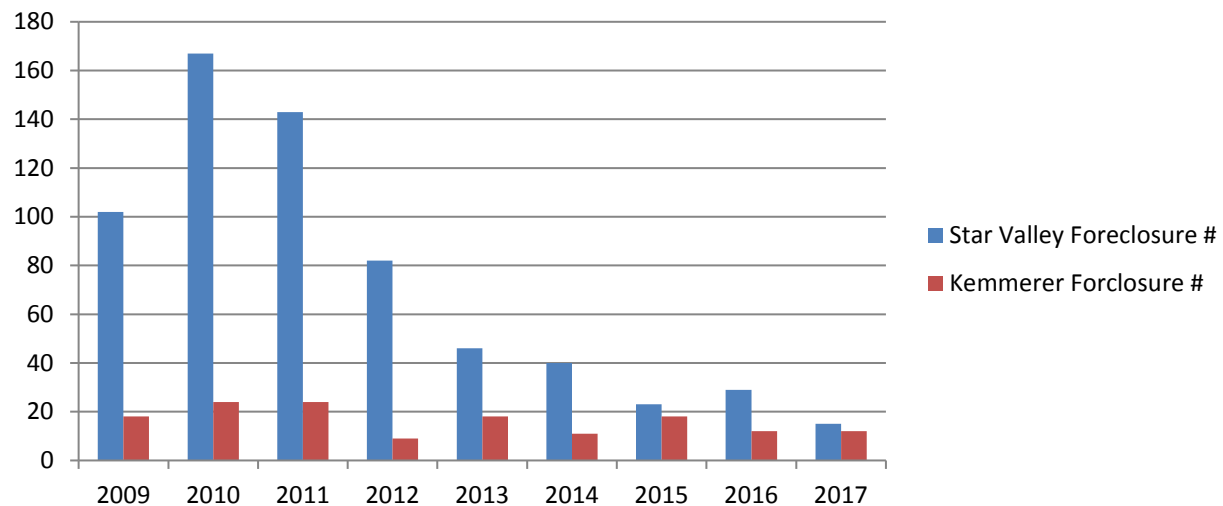
A comparison of Lincoln County and Star Valley and a comparison between Star Valley and Non-Star Valley are shown in the graphs below.

## Lincoln County Foreclosures through August 2017



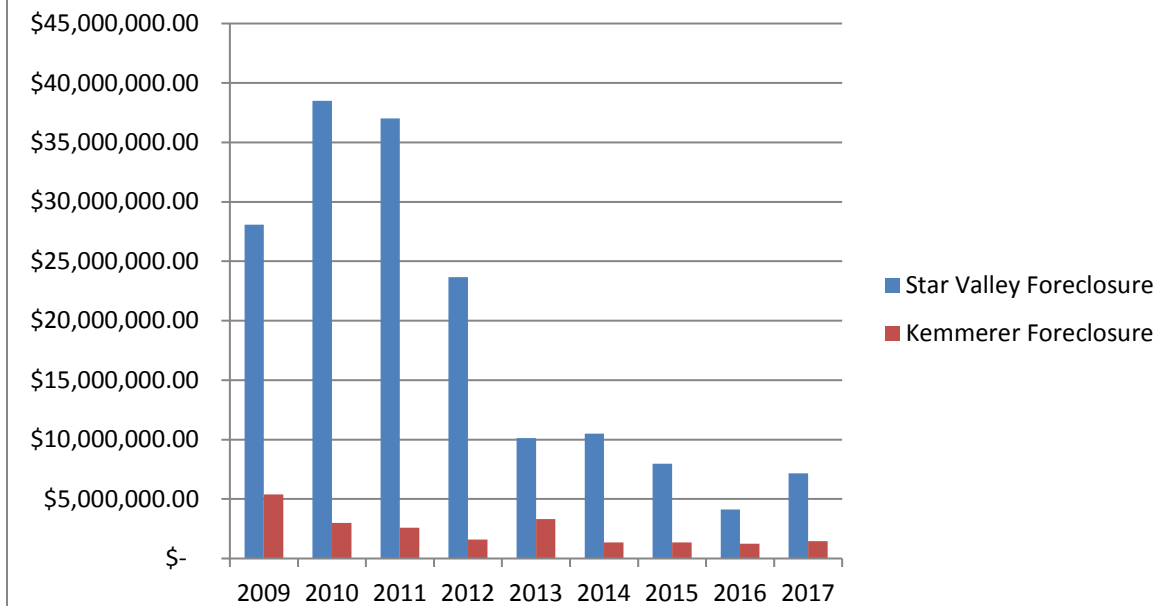
Source: Kemmerer Gazette

## Star Valley and Non Star Valley Foreclosure Comparison (Through August 2017)



Source: Kemmerer Gazette

## Star Valley and Non Star Valley \$ Comparison



Source: Kemmerer Gazette

## RENTAL COSTS

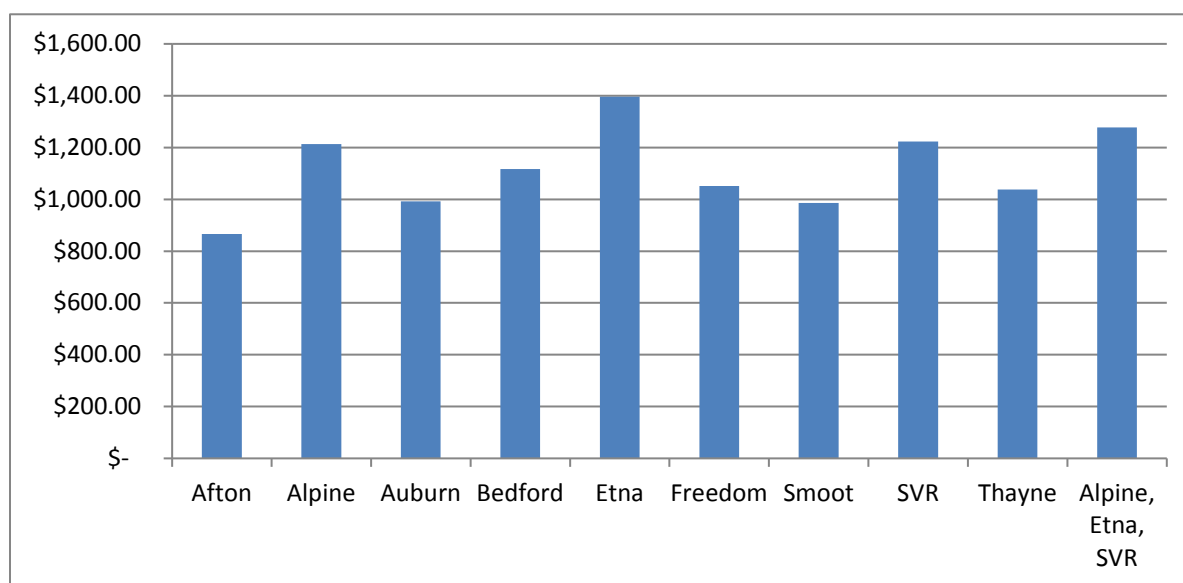
This year, the Bank researched in greater detail the cost of renting a home in the Star Valley area. With the passage of Dodd-Frank in 2010 in response to the Great Recession, and the

resulting greater regulatory emphasis on Ability-To-Repay, enhanced Qualified Mortgage and Qualified Residential Mortgage rule, and the many other related consumer protection requirements, it is harder for individuals to obtain a mortgage to purchase a home. Robert Davos, American Bankers Association executive vice president, commented that “As expected, the ability-to-repay and QM rules have dampened the housing market recovery. Combine that with new mortgage disclosures, and we’ll continue to see a slowdown in what should be the ideal time to buy a home.”

The regulatory impacts on Dodd-Frank are particularly stressful for individuals of moderate income residing in a higher priced real estate market – which is the very essence of the Star Valley housing market. The results of this legislation and the regulatory requirements are forcing more and more people into the rental market for a longer period as they cannot obtain a mortgage to purchase a home.

The Bank estimated a typical home mortgage payment for a number of homes which were sold in respective areas of Star Valley under conventional underwriting standards, and then compared the monthly cost of a mortgage in that area to the reported monthly rent cost.

The average cost of renting in the Star Valley area is high, and is close to a typical mortgage payment for a single-family home. The overall average was \$1,067.33 for all of Star Valley apartment and home rent costs. The average monthly cost for a rental house was \$1,093.39 and the average monthly rental cost for an apartment was \$993.86 in this year’s average apartment sample throughout the valley. The average rental price by town is shown below. Caution should be used when studying the graph as some towns only had a couple data points to average.

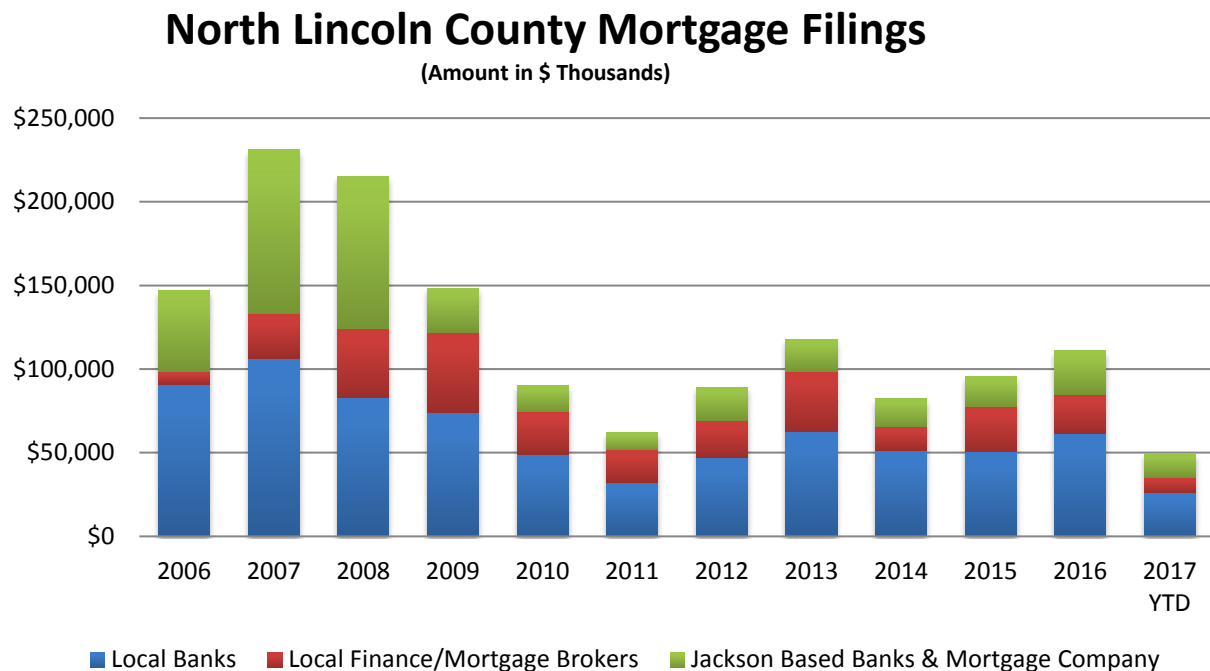


Source: Local landlords and Misty’s List

The Alpine, Etna, and SVR average shows a higher rent cost in these areas. The authors feel that this is due to the larger Jackson based commuter population that lives in the lower valley and apparent lack of housing inventory.

## MORTGAGE FILINGS

The number and dollar amount of mortgages is another indicator of real estate market activity. Since May 2004, the Bank has been tracking this data thanks to the help of the Lincoln County Clerk. As seen below, the number of mortgages fell with the recession. The total amount of mortgages filed numbers started to climb again in 2012 and have hovered around \$100,000,000 since, with about 44% of last year's total accrued for mid-year 2017.



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