

2017 ANNUAL GROWTH AND DEVELOPMENT PROJECTION REPORT

Prepared in Support of the
Capital Improvement Planning Process



Staff

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Executive summary

The Annual Growth and Development Projections Report estimates new residential construction in the near future. This report provides a “snapshot” of the growth anticipated in the beginning of each year. Over many years, the number of new single-family homes has significantly exceeded the number of multi-family units. During the most recent economic recovery, however, the number of multi-family units has greatly exceeded the number of single-family units. In 2015, building permits were issued for 941 new dwellings, of which 449 were single-family and 492 were multi-family. In 2016, building permits were issued for 244 single family homes and 333 multi-family units for a total of 577 residential units.

As Greeley has approached full employment, the rate of employment growth has declined during the last year. The unemployment number and rate both declined, although less substantially than in previous years as the Greeley MSA approached full employment.

It is unclear why the number of permits for new residential units has declined in 2016 in Greeley at the same time as more new residential permits were issued in Fort Collins, Loveland, and Windsor than in 2015. It is possible that the number of finished lots is beginning to limit the ability of builders to supply new housing units.

There are a total of 275 multi-family units under construction as of Feb. 1, 2017, down from 407 a year ago. In addition, there are permit ready sites for an additional 209 additional units up from 60 a year ago. There are 100 units currently under site planning or zoning review down from 433 (Community Development Department, 2016).

Between 1991 and 2015, growth rates ranged from a low of 0.12% to a high of 4.14%. The distribution of these growth rates is highly bimodal, with lower growth rates occurring during and immediately following recessions and higher growth rates occurring during recovery periods.

Greeley experienced an unexpected 38% drop in permits issued for new residential units in 2016 while other large municipalities saw growth. This does not appear to be related to the economy since median household income increased significantly and Greeley is near full employment. The household income growth and low unemployment rate is counter to declines in oil drilling throughout 2015 and 2016. This speaks of the growing diversity of the Greeley and Front Range economy. We are projecting that the recent drop in residential building activity will continue through 2018 with a return to higher rates in 2019. Long term diversification of Northern Colorado’s economy is expected to continue, and this has, and will continue to have,

a positive effect on Greeley. We can expect between 400 and 500 permits for new housing units to be issued during each of the next two years.

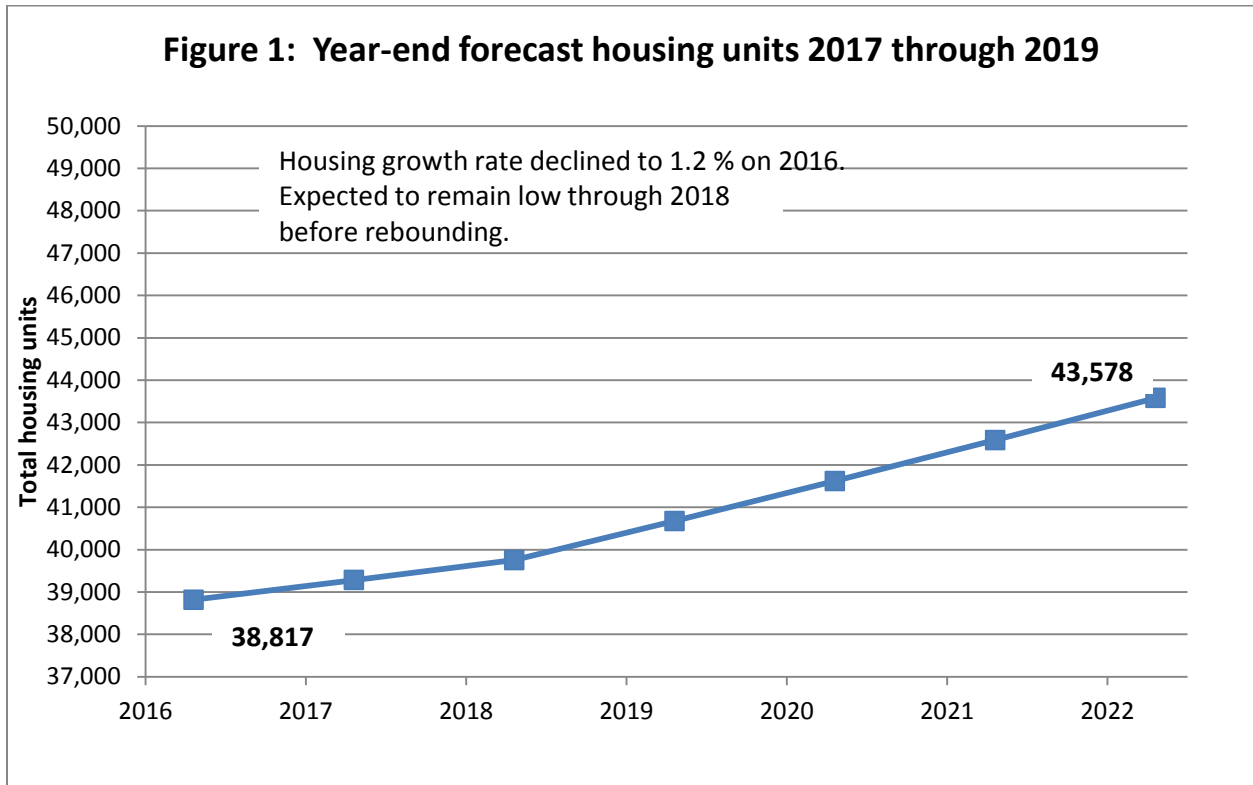


Table 1: Projected Split Of Multi-Family and Single Family Housing

| | Total New Housing Permits | Single Family Permits | Multi-Family Permits |
|------|---------------------------|-----------------------|----------------------|
| 2017 | 466 | 146 | 320 |
| 2018 | 471 | 203 | 269 |
| 2019 | 922 | 397 | 526 |
| 2020 | 944 | 377 | 566 |
| 2021 | 966 | 386 | 579 |
| 2022 | 992 | 397 | 595 |

I Introduction and Methodology

The Annual Growth and Development Projection Report provides estimates of how much new residential development will occur in the next five years within the City of Greeley, Colorado. It examines historic and recent development and annexation activity, and uses apparent trends, along with local and regional projections, to forecast building activity in the coming years.

This report is intended to provide a “snapshot” of the growth anticipated at the beginning of each year based on:

- 1) The actual history of growth and development during previous years;
- 2) Regional economic projections;
- 3) Permit ready lots; and
- 4) Other factors that have the potential to affect expected trends.

After permits were issued for 941 new residential units in 2015, during 2016, only 577 permits (a 39% drop) were issued for new residential units in 2016. As the economic recovery continued, there was significant growth in the size of the workforce and the number of persons employed as well as a significant decline in the number of persons unemployed. The unemployment rate declined less as the area approaches full employment. Some of this growth was driven by increased oil and gas drilling activity as hydraulic fracking technology was deployed. A more than 50% decline in the price of oil throughout the second half of 2014 and all of 2015 has a lower impact than might be expected on the local economy because of diversification over the last decade.

This report is part of a four step analysis used to help inform the City’s five-year Capital Improvements Plan (CIP), a mechanism for meeting the service and infrastructure needs of future development while maintaining existing service levels and managing community resources. The other parts of this analysis are the annual population estimate and the mapping of adequate public facilities. Through the CIP, the City also estimates development fee revenue that may be available to meet growth demands. City departments recommend projects which may then be incorporated into the City budgeting process. Future infrastructure upgrades and public facility construction are scheduled based on available resources.

The methods used in this report include both quantitative projections and qualitative forecasting and are employed in a four-step process. Staff uses a variety of information

sources, including building permit data, information from the real estate and building communities, and economic data from regional and state organizations.

Step 1

The first step uses historic home-building activity trends and projects growth for the following year, assuming continuation of recent trends. Using records from 1991 through 2016 provides a 25-year record of homebuilding activity that extends through high and low growth periods. This record covers three recessions and their recoveries. It also captures trends driving homebuilding including the increase in recent oil and gas drilling employment, increased employment in agricultural processing, the collapse of the so called “housing bubble,” the trend to “drive ‘till you qualify”, and other trends during that time. This historic permit data is used to project high, medium, and low projections of new units expected to be constructed for the next five years assuming current trends continue.

Step 2

The next step is to identify regional economic trends that will affect where the actual number of new permits will fall within the confidence interval projected from historic trends. These include an assessment of current regional and Greeley employment history, a review of the *Colorado Business Economic Outlook* published by the Leeds School of Business at the University of Colorado, and the Northern Colorado Economic Forecast sponsored by the Montfort College of Business at Northern Colorado University. In addition, staff also considers state housing and population projections generated by the Colorado Department of Local Affairs (DOLA), more localized population projections published by the North Front Range Metropolitan Planning Organization (NFRMPO), the Colorado Division of Housing Multi-Family Vacancy and Rental Survey (Throupe, 2015 a), input from the building community and planning staff on upcoming projects, and information from the real estate community. Specific assumptions are noted throughout the report.

Step 3

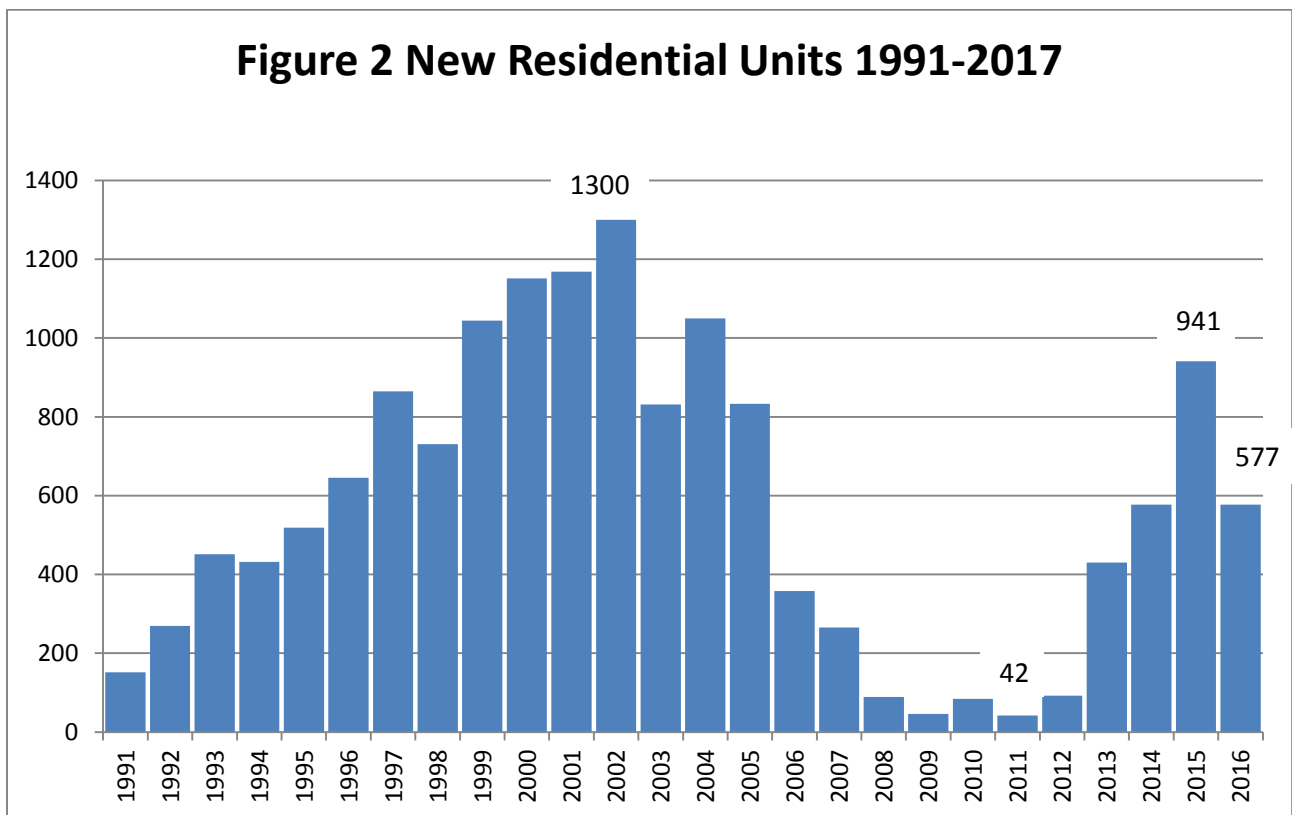
The third step is to prepare an inventory of permit-ready lots and lots in the review process that will likely become permit-ready within the forecast period.

Step 4

The final step is to examine other factors and trends that could affect expected homebuilding trends. These include the recent change in the ratio of multi-family to single-family housing, recent changes in the price of oil discussed above, and recent increases in the cost of raw water in Northern Colorado.

II History of Residential Growth

Since 1991, Greeley’s residential growth has been occurring in waves ranging from approximately 0.5 % to 4% per year with an average of about 1.9%. Figure 2 shows 26 years of new residential building permits. After relatively modest but steady increases in home construction throughout most of the 1990s, Greeley began to experience annual permit growth rates of nearly 4% beginning in 1999. The high growth rate peaked in 2002 with 1,300 new residential units, translating to an actual growth rate of 4.14% over 2001. Beginning in 2003, Greeley experienced five years of declining new construction followed by three years of stagnant low level housing construction. During the mortgage crisis and Great Recession, Greeley experienced limited building. Permits for new housing reached a low of 42 units in 2011. Beginning with a small increase in building activity in 2012, Greeley experienced four years of significant growth in new housing construction. New housing construction peaked again in 2015 with 941 permits for new units (Community Development Department, 2015). In 2016, there were 577 permits issued for new residential units.



Mix of single and multifamily units

Since 2012, most of the new home construction consisted of multifamily units as shown in Table 2 and Figure 3. Over many years, the number of new single-family homes has significantly exceeded the number of multi-family units. During the most recent recovery, however, the number of multi-family units has greatly exceeded the number of single-family units (Community Development Department, 2015).

| TABLE 2: NEW HOUSING MIX | | | |
|---------------------------------|----------------------------|--------------------------|--------------|
| Year | Single Family units | Multifamily Units | Total |
| 2008 | 63 | 29 | 92 |
| 2009 | 46 | 0 | 46 |
| 2010 | 80 | 5 | 85 |
| 2011 | 35 | 7 | 42 |
| 2012 | 55 | 42 | 97 |
| 2013 | 155 | 275 | 430 |
| 2014 | 244 | 333 | 577 |
| 2015 | 449 | 492 | 941 |
| 2016 | 244 | 333 | 577 |

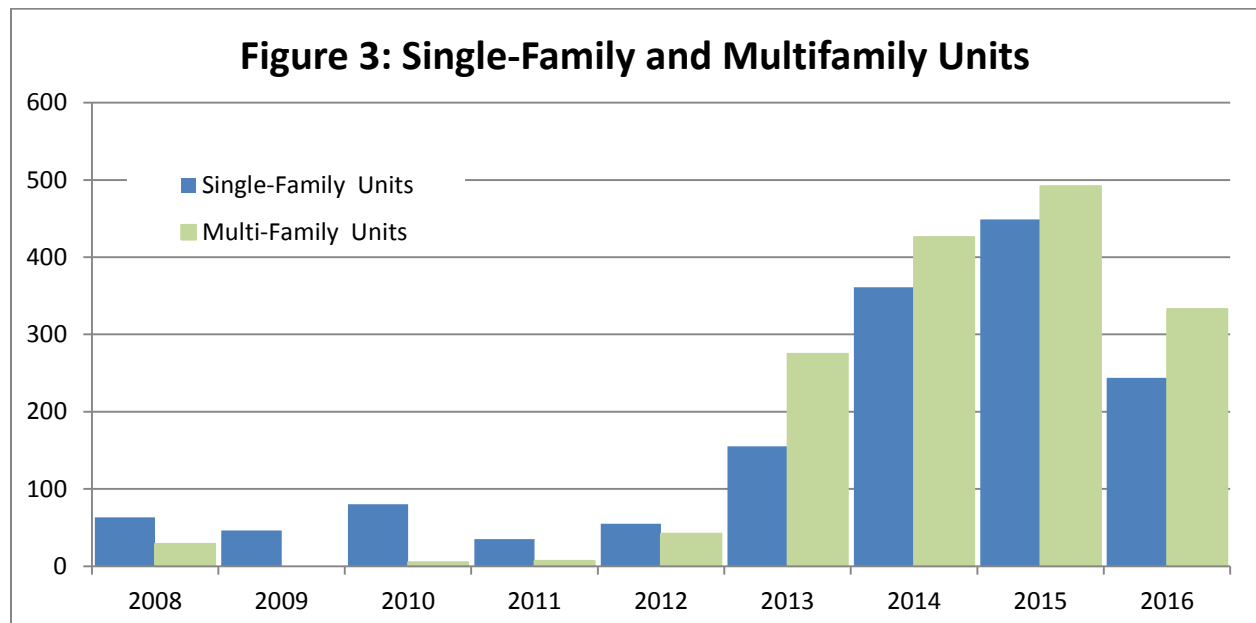


TABLE 3: RESIDENTIAL VACANCY RATE

| Vacancy Rate | | |
|--------------|-------------|---------------|
| year | Multifamily | Single Family |
| 2010 | 8.6% | 4.9% |
| 2011 | 5.6% | 4.5% |
| 2012 | 4.6% | 3.3% |
| 2013 | 3.3% | 3.3% |
| 2014 | 3.8% | 3.0% |
| 2015 | 5.0% | 2.9% |
| 2016 | 3.8% | 2.8% |

Table 3 and Figure 4 show the vacancy rates for single and multi-family housing. Since 2010, the multi-family vacancy rate has declined by 81% from 8.6% to 1.6% (Greeley Urban Renewal Authority, 2014) (Throupe, 2015 a). Between the second and third quarters of 2015, several large multi-family projects were completed that raised the vacancy rate to 5% (Throup, 2015 b). A healthy multi-family vacancy rate is considered to be 5% since this gives prospective tenant a reasonable chance at finding a suitable housing unit while giving landlords a reasonable chance at renting any vacant units fairly quickly. At an optimal 5% vacancy rate in multi-family there would be 689 vacant units. A vacancy rate of 1.6% would mean there are only 220 vacant units.

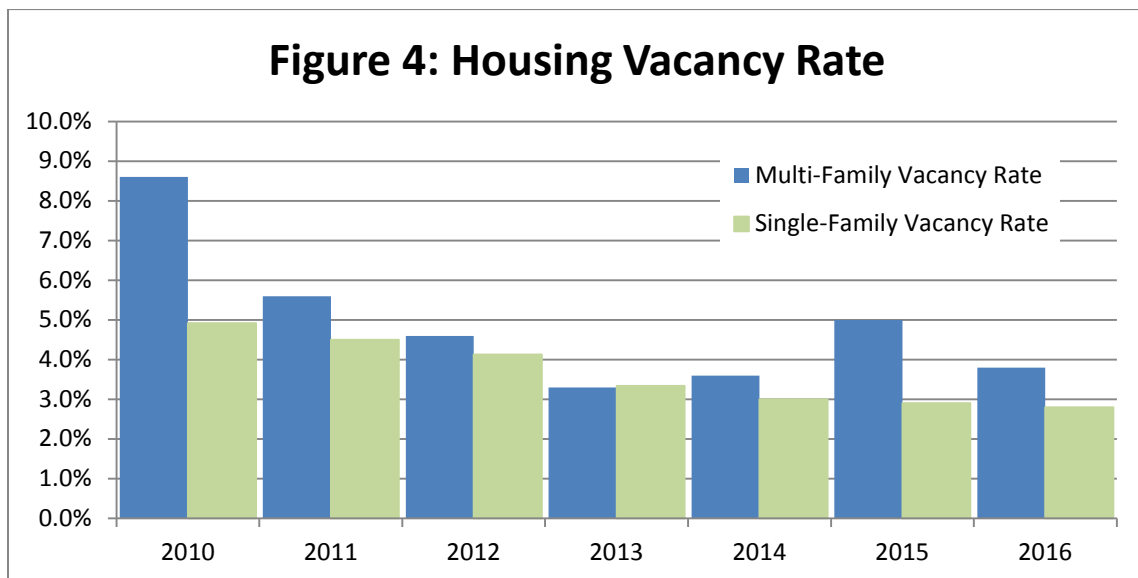


Table 4 shows the change in Greeley’s housing stock from construction, annexation, and demolitions from 2008 through 2016. It also shows the year-over-year percent change in construction activity and percent change in the total housing stock. The percent change in new construction from one year to the next provides a vivid picture of one of the uncertainties of housing. Given that the number of new units

can decline by as much as 50% or rise by over 360% from one year to the next, it becomes extremely difficult for subcontractors or tradespersons to predict whether there will be work or not. This may be a reason why many contractors throughout Northern Colorado are having difficulty finding experienced people to fill jobs in the skilled trades.

Table 4: Change in Housing Activity 2008-2015

| Year | Construction Only (Units) | Percent Change in Construction | Housing Units Annexed | Additional Housing (Construction + Annexation) | Gross Units | (-) Demolitions | (=) Net Units Beginning of next year | Housing Growth Rate |
|------|---------------------------|--------------------------------|-----------------------|---|-------------|-----------------|--------------------------------------|---------------------|
| 2008 | 86 | -48.8% | 3 | 89 | 36,076 | 0 | 36,076 | 0.25% |
| 2009 | 45 | -47.7% | 1 | 46 | 36,122 | 9 | 36,113 | 0.10% |
| 2010 | 84 | 86.7% | 0 | 84 | 36,197 | 8 | 36,189 | 0.21% |
| 2011 | 42 | -50.0% | 0 | 42 | 36,231 | 0 | 36,231 | 0.12% |
| 2012 | 92 | 119.0% | 0 | 92 | 36,323 | 10 | 36,313 | 0.23% |
| 2013 | 430 | 367.4% | 1 | 431 | 36,744 | 3 | 36,741 | 1.18% |
| 2014 | 577 | 34.2% | 1 | 787 | 37,529 | 0 | 37,529 | 1.57% |
| 2015 | 941 | 63.1% | 0 | 941 | 38,470 | 7 | 38,463 | 2.51% |
| 2016 | 577 | -38.7% | 0 | 577 | 39,040 | 16 | 39,024 | 1.50% |

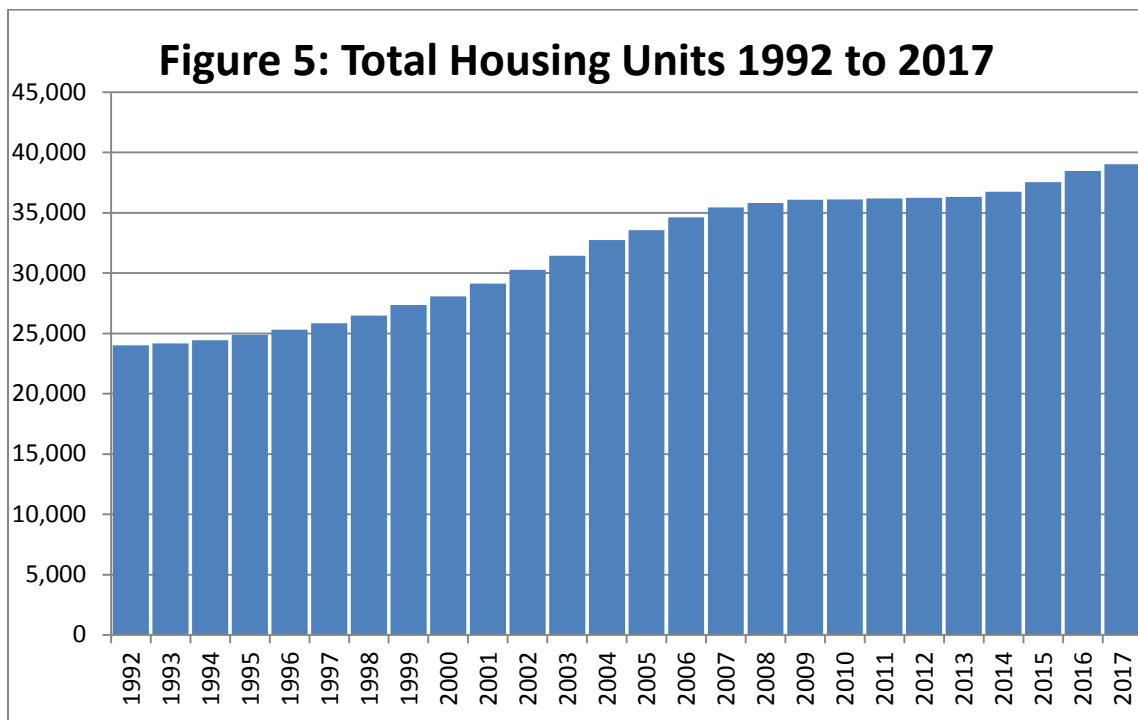
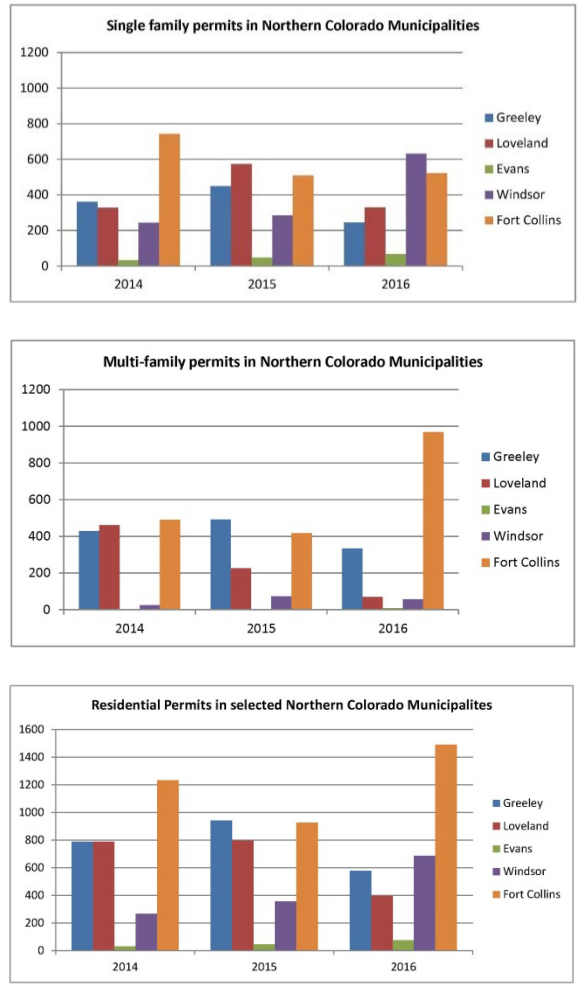


Figure 5 shows that the total housing stock plus building permits and annexations and subtracting demolitions has increased from 24,012 to 39,024 between 1992 and January 2017.

III Regional Housing Trends

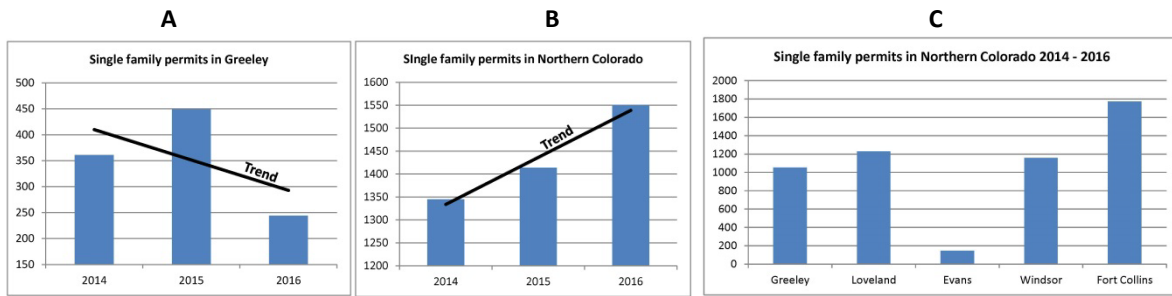
Comparing new housing permits in Greeley to the rest of Northern Colorado helps to provide insights into trends in Greeley. Figure 6 shows a comparison of building permits in Greeley, Loveland, Evans, Windsor and Fort Collins for single family, multi-family, and total residential units permitted in 2014, 2015, and 2016.

Figure 6 Comparison of new residential permit activity in Northern Colorado municipalities over the last 3 years



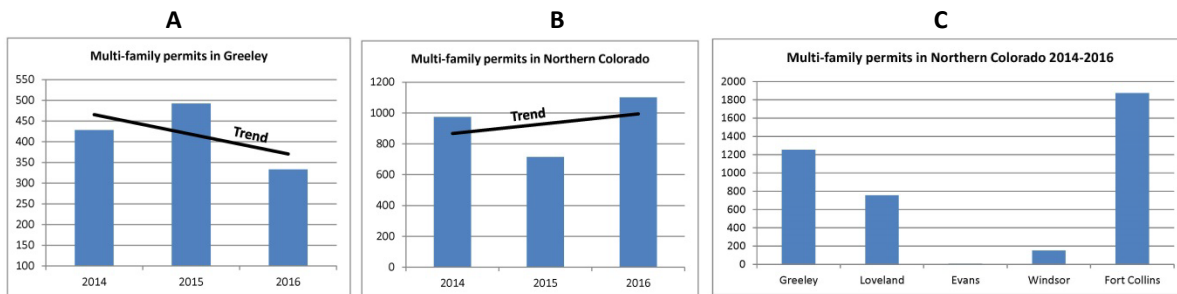
Over the three year period, Fort Collins has lead in the number of single family residential permits issued with 1774, followed by Loveland with 1229, Windsor with 1159, and Greeley with 1054.

Figure 7 Comparison of new single family permits in Northern Colorado municipalities over the last 3 years



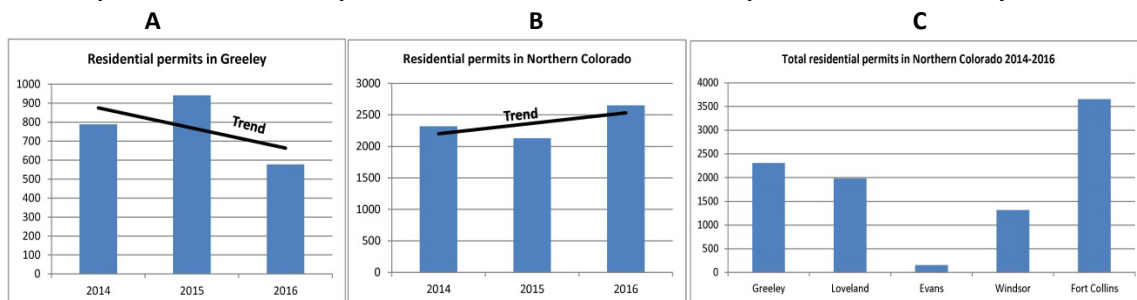
Fort Collins issued permits for the most multi-family units with 1875, followed by Greeley with 1253, and Loveland with 755. Evans and Windsor combined issued permits for fewer than 200 units.

Figure 8 Comparison of new multi-family permits in Northern Colorado municipalities over the last 3 years



Adding the single and multi-family permits gives the total residential permits issued during the three year period. The results can be seen in Figure 9. Fort Collins issued the most residential permits with 3649, followed by Greeley with 2307, Loveland with 1984, and Windsor with 1311.

Figure 9 Comparison of residential permits in Northern Colorado municipalities over the last 3 years



Figures 7, 8 and 9 show that since 2014, residential permits in Northern Colorado have shown an upward trend in both single, multi-family, and total units permitted. In Greeley, however, this trend has pointed downward. With only three years of data, it is too soon to make any long-term projections, but the trend bears watching in future years. The reasons for the decline in new residential permits when the rest of Northern Colorado has an increased numbers of both single and multi-family units permitted are discussed in more detail in Chapter VIII. In all cases, single family, multi-family, and total housing units, the three-year trend in Greeley was

negative while the trend in Northern Colorado municipalities was positive. This trend has not been followed prior to 2014 but it bears watching during future years.

IV Population Estimate

Table 5 shows Greeley’s population estimates from 2010 to 2017. Figure 10 shows the annual estimated population between 1992 and 2017. Since 1992, Greeley’s estimated population has grown 61.9% from 64,832 to 104,939 people. The growth rate has fluctuated between 0.10% and 4.13 %, averaging 1.9% and with a standard deviation of 1.06%.

| Table 5: 2017 Population Estimate | | | | | | | |
|--|---------------|---------------|---------------|---------------|------------|-------------|-------------------|
| Year | SFD | SFDocc | MFD | MFDocc | AHS | UP | Population |
| 2017 | 24,910 | 0.972 | 14,002 | 0.962 | 2.7 | 3196 | 104,939 |
| 2016 | 24,670 | 0.950 | 13,681 | 0.971 | 2.7 | 3347 | 103,037 |
| 2015 | 24,221 | 0.971 | 13,189 | 0.962 | 2.7 | 2671 | 100,428 |
| 2014 | 23,976 | 0.967 | 12,856 | 0.967 | 2.7 | 3196 | 98,423 |
| 2013 | 23,743 | 0.967 | 12,581 | 0.954 | 2.7 | 2,900 | 97,320 |
| 2012 | 23,688 | 0.959 | 12,539 | 0.944 | 2.7 | 2,980 | 96,093 |
| 2011 | 23,646 | 0.955 | 12,539 | 0.914 | 2.7 | 3,027 | 95,453 |
| 2010 | 23,570 | 0.951 | 12,539 | 0.914 | 2.7 | 3,090 | 94,358 |

Population Estimate Based on Modified Housing Method (2010)

SFD= Single family detached; SFD occ= SFD occupancy rate; MFD= Multi-Family Units; MFDocc= MFD occupancy rate; AHS= Average Household size; UP= University Population

Estimated Population = [(SFD x SFDocc) + (MFD x MFDocc)] x AHS + UP

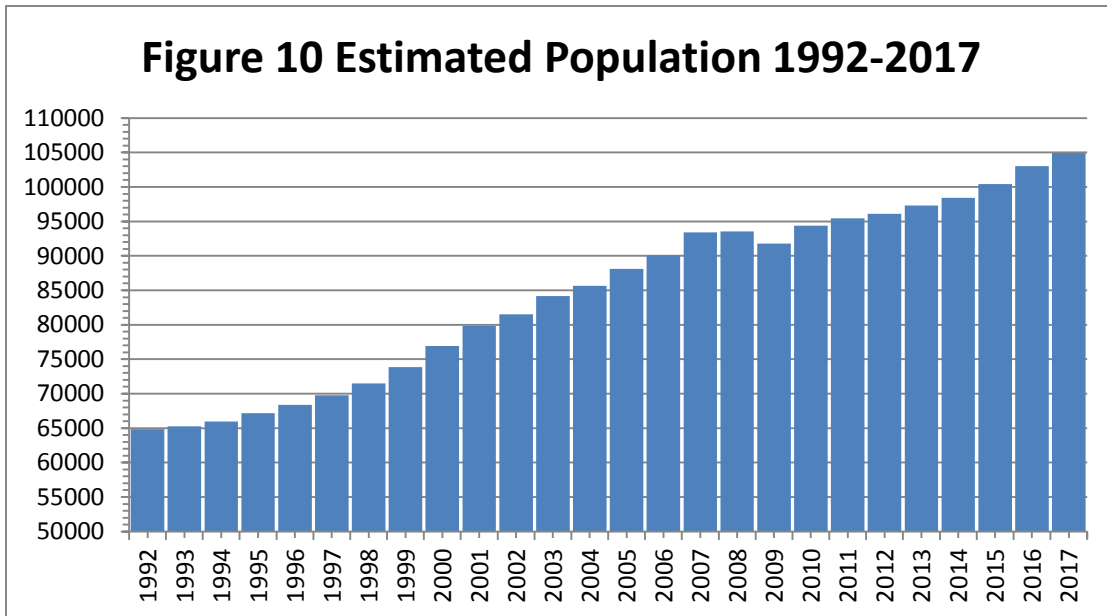
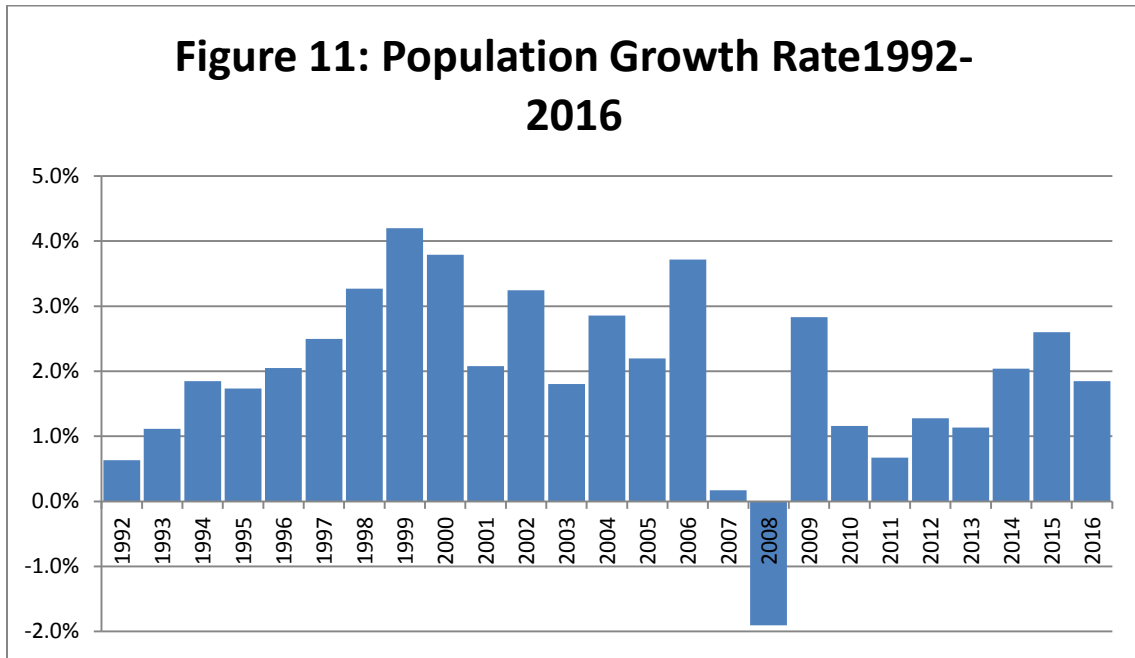


Figure 11 shows that the total population growth rate has varied between -1.91% and 4.20% between 1992 and January 2017.



The population growth rate in Greeley has averaged 1.9 % per year since 1992. Since 1980, the population growth rate has averaged 1.87 %. This growth rate has been slower than that of Weld County and the Northern Colorado region as a whole. Nonetheless it is healthy and includes significant in-migration, especially when compared to portions of western Kansas and Nebraska that are losing population.

V Employment

Employment continues to improve slowly throughout Colorado, but significantly more in Northern Colorado. The civilian labor force grew by 3.96% statewide, while the Greeley MSA, which includes all of Weld County, civilian labor force grew by only 1.28%, the lowest of any Metropolitan Statistical Area in the state as shown in Table 6 after several years of being at the highest growth rate.

| Table 6: Employment Statistics for Colorado MSAs December 2016 | | | | | | | | |
|---|-----------------------------|--------------------------------|------------------------|--------------------------------|--------------------------|--------------------------------|--------------------------|--------------------------------|
| MSA | Civilian Labor Force | % Change over Dec. 2014 | Number Employed | % Change over Dec. 2014 | Number Unemployed | % Change over Dec. 2014 | Unemployment Rate | % Change over Dec. 2014 |
| Boulder-Longmont | 182,496 | 4.51% | 178,066 | 4.73% | 4,430 | -3.76% | 2.20% | -15.38% |
| Colorado Springs | 325,997 | 4.96% | 314,691 | 5.55% | 11,306 | -9.06% | 3.20% | -20.00% |
| Denver Aurora | 1,560,290 | 4.44% | 1,515,220 | 4.84% | 45,070 | -7.42% | 2.60% | -21.21% |
| Fort Collins-Loveland | 186,996 | 4.08% | 182,231 | 4.64% | 4,765 | -13.58% | 2.30% | -25.81% |
| Grand Junction | 72,771 | 0.56% | 69,305 | 1.36% | 3,466 | -13.26% | 4.30% | -21.82% |
| Greeley | 153,414 | 1.28% | 148,866 | 1.78% | 4,548 | -12.71% | 2.60% | -23.53% |
| Pueblo | 73,860 | 2.94% | 70,363 | 3.28% | 3,497 | -3.40% | 4.30% | -14.00% |
| Colorado Totals | 2,920,064 | 3.96% | 2,826,542 | 4.08% | 93,522 | 0.38% | 3.20% | -3.03% |

(Colorado Department of Labor and Employment, 2016)

The total number of employed people also increased, with a statewide growth of 4.08% statewide and 1.78% in the Greeley MSA. At the same time, the unemployment number and rate declined at 12.71% and 23.53% respectively.

Table 7 shows the year-over-year comparison of employment in the Greeley MSA (Colorado Department of Labor and Employment, 2016). While the total workforce and the number of employed persons grew more slowly than in recent years, this is most likely the result of

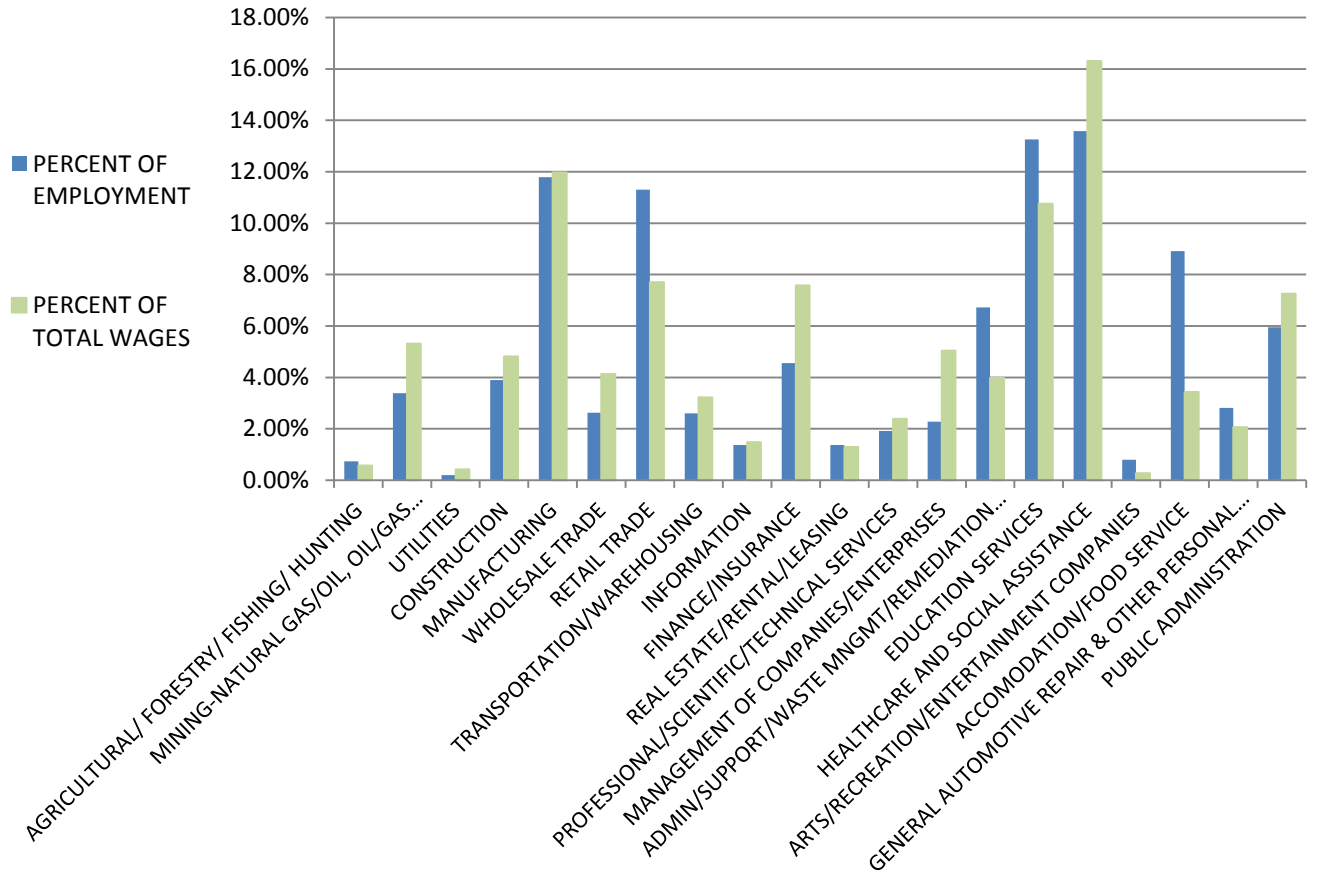
reaching full employment rather than a softening of the economy. Examining low unemployment rate in the Greeley MSA appears to indicate that there could be significant pent up regional demand for housing. This demand may currently be addressed through doubling up on housing units, long distance commuting, or employed persons living in campers or group housing away from their families.

| Table 7: Year to Year Employment Comparison | | | | | |
|--|--------|--------|--------|--------|--------|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| Civilian labor force | 119038 | 124178 | 134817 | 150737 | 153414 |
| Number Employed | 108261 | 115507 | 128851 | 145334 | 148866 |
| Number unemployed | 10777 | 8671 | 5555 | 5403 | 4548 |
| Unemployment Rate | 9.1% | 7.0% | 3.9% | 3.60% | 2.60% |

During the most recent recovery, Greeley’s economy has continued to diversify depending much less on oil and gas than it had during the 1980s. As a result, the dramatic decline in oil prices, while it had a significant impact on employment in the oil and gas sector, had much less of an impact on the broader Greeley economy.

Figure 12 shows the percent of employment and the percent of payroll in industries in Northern Colorado. Industries with a higher percentage of total wages than the percentage of employees have a higher than average wage, while industries having a lower percentage of wages than employment have a lower than average wage.

Figure 12: Employment by Industry



VI Employment and Income Picture

Agriculture

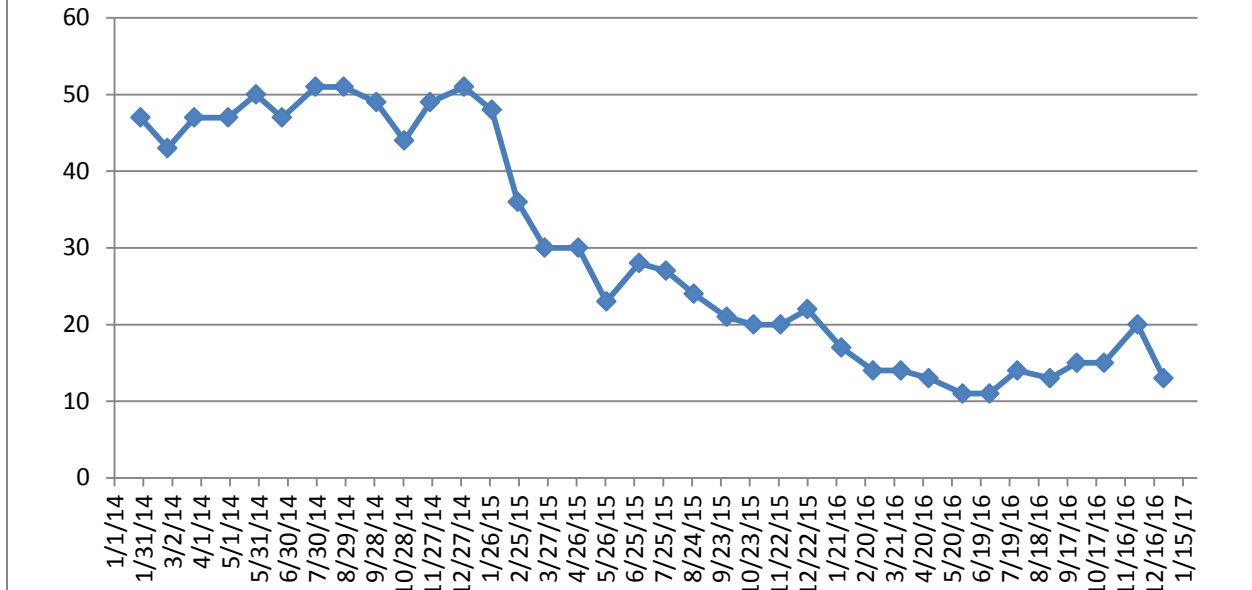
Weld County is the ninth most productive agricultural county in the United States and the most productive outside California in terms of the value of agricultural products produced (Bureau of the Census, 2012). While crop production is a significant portion of this value and is an important support of food processing plants, it is food processing that generates most of the added value. In 2015, agricultural commodity prices are expected to soften, leading to lower profits for farmers. This can lead to the consolidation of farms into fewer but larger operations that eventually rely on less labor but are larger and more capital intensive. Consolidation does not reduce total acreage or crop production, but urbanization of land and conversion of water to municipal and industrial use does affect agricultural crop production (Bureau of the Census, 2012). Leprino foods, a major dairy processing company has plans for a significant addition to its Greeley Plant. Workers in this plant are most likely to live in rental and multi-family housing.

One of the major trends affecting the future of agriculture is the sale of agricultural water for municipal and industrial uses which can lead to permanent reduction in irrigated cropland. During the past two years, the price of agricultural water has nearly tripled (Lynn, 2015). This dramatic increase in price together with the average age of farmers can create an incentive to sell these water rights. After the sale of water rights for future municipal and industrial use, a municipality typically pursues a “change in use” and a “change in diversion” through the water court and the water continues to be rented to the farmer for agricultural use. As more water is converted, land is taken out of production and dried up.

Uncertainty in oil and gas

The price of West Texas Intermediate crude oil has dropped from \$105.79 per barrel on June 24, 2014 to under \$30.00, prices not seen since 2004. It has since recovered to between \$50.00 and \$60.00 per barrel. As can be seen in Figure 13, the number of drilling rigs took a substantial drop from the upper 40s to low 50s before January to May of 2015 and has remained in the low to mid-twenties since then dropping to 13 in May of 2016 (Colorado Oil and Gas Conservation Commission, 2015).

Figure 13: Number of drilling rigs operating in Weld County



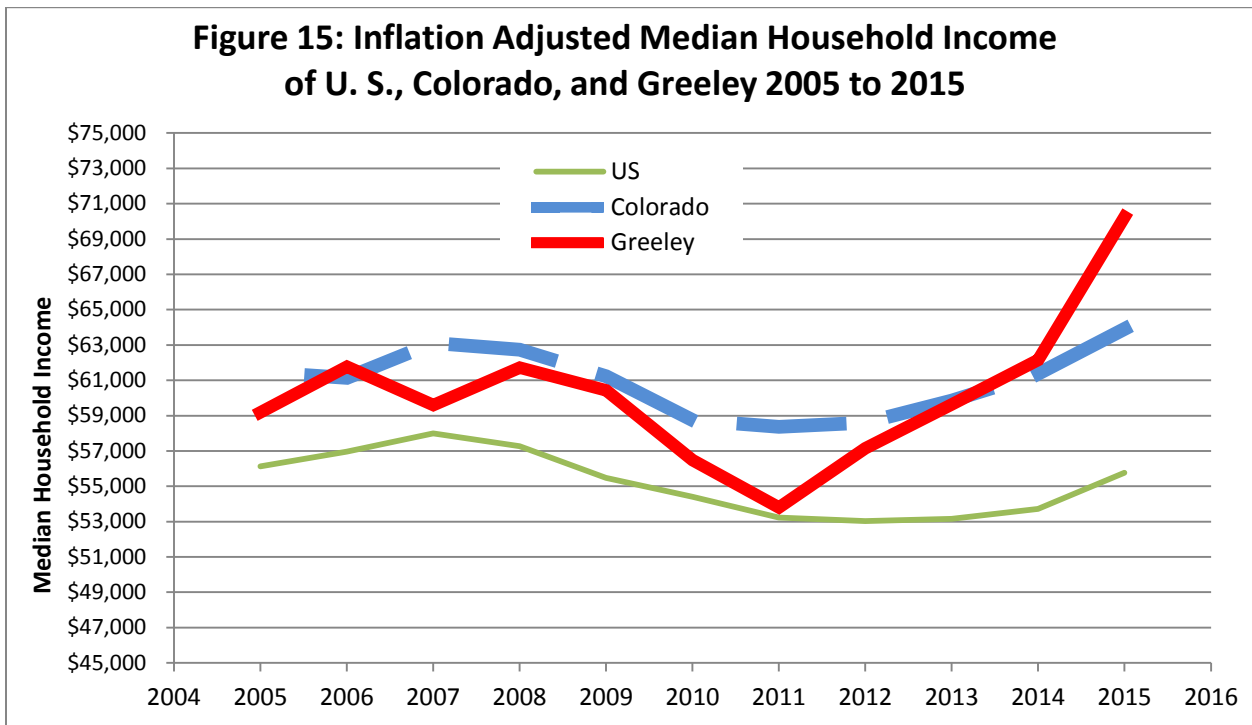
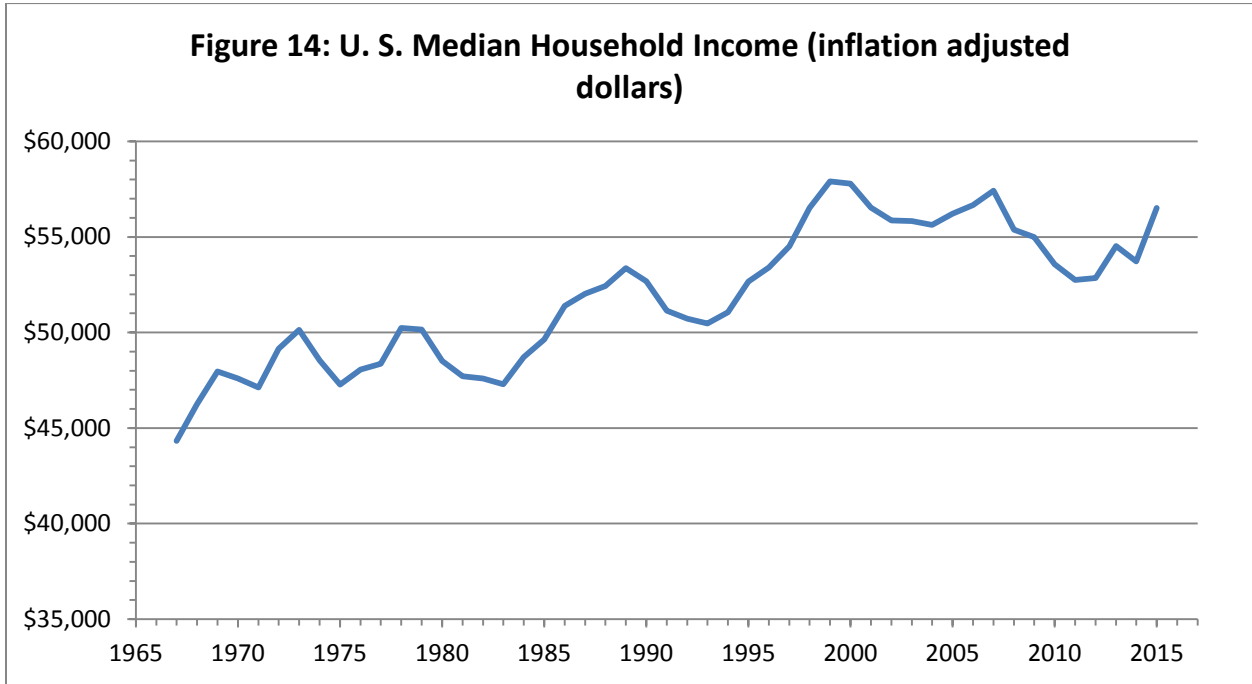
Since the drilling and fracking of each well employs approximately 100 to 125 people. (Shields, 2015), the reduction of 30 active drilling rigs represents the loss of 3600 to 3750 jobs that pay well above the median income. During 2016, the number of active drilling rigs in Weld County reached as high as 20 only in December after falling as low as 11 in May and June. Despite the reduced drilling activity, median household income in Greeley increased during 2015.

Long term U. S. real wage trends

A long term trend in the American economy is the decline in real wages as higher wage jobs are lost to automation and the international labor market and replaced by lower wage jobs in service industries. Lower wage workers are less likely to be able to afford the mortgage payments on single-family homes. Many of the recently created high wage jobs are in the energy industry, which is subject to rapid changes in unemployment. Many energy workers have been reluctant to invest in single-family housing even if they can afford it, because they may need to relocate within a short timeframe.

Figure 15 shows the inflation adjusted median household incomes for the U. S., Colorado, and Greeley from 2005 through 2015. U. S. real median household income adjusted for inflation peaked in 2007 at \$57,211. From 2007 until 2012, real median household income declined 7.4% to \$52,970(see figure 10). Since then it has recovered to 98 % of its 2007 high, \$56,516 in 2015 (the latest year for which median household income is available). Colorado’s real median

household income adjusted for inflation also peaked in 2007 at \$63,042 and declined by 15.4% to \$58,304 in 2011. Since then it has recovered nearly its entire decline to \$63,909 in 2015



Greeley's real median household income adjusted for inflation peaked in 2006 and again in 2008 at \$61,767 and 61,719, respectively, and declined 12.9% to \$53,810. Since then it has reached \$70,256 surpassing its previous peaks and exceeding the Colorado adjusted household median income. Much of this increased income can be attributed to the regional energy activity as well as increased demand for workers in the broader economy.

As can be seen in Figure 15, at the end of 2014, Greeley's household median income exceeded that of both Colorado and the U. S. and was increasing. Figure 7, however shows a significant decrease in oil and gas drilling rigs operating in Weld County through 2015. In spite of the continued decline in drilling activity in Weld County, in 2015, median household income adjusted for inflation spiked significantly.

VII Land supply

An important factor in projecting building permits is an examination of the supply of lots. As existing developed lots are absorbed by building activity, are they being adequately replaced by developed and platted lots? Table 8 shows the inventory of developed and final platted single-family lots as of the beginning of 2014 through the beginning of 2017. Single-family lots are rapidly being absorbed and built upon. With the increase in home building in 2014, several subdivisions were approved through final platting, developed and had many homes completed.

| Table 8: Potential Single Family Units Based on Buildable Lots | | | | |
|---|---------------------------|-------------|-------------|-------------|
| Approval Status | Single Family Lots | | | |
| | 2014 | 2015 | 2016 | 2017 |
| Approved projects with infrastructure installed (permit ready) | 656 | 651 | 509 | 395 |
| Created via demolition since 2012 | 13 | 13 | 20 | 1 |
| Total Permit Ready Units | 669 | 664 | 529 | 396 |
| Approved Projects with incomplete infrastructure | 620 | 646 | 519 | 549 |
| Net Permit ready Lots + Platted Lots | 1289 | 1310 | 1048 | 945 |

The net change in available lots between 2014 and 2015 is a 20% decrease in both total lots and finished lots. At the beginning of 2015, 664 developed lots remained available for builders. By 2016 the number of permit-ready lots had declined 20% to 529, while the total number of both permit ready and paper lots also declined 20% to 1048. In 2016, there were 244 single family permits issued significantly below the trend in permit activity regionally leaving 396 permit ready lots and 549 paper lots for 2017. At the rate of building, 449 single-family dwellings in 2015, the current activity in platting and development of lots appears to be insufficient to maintain an adequate long-term flow of lots. It is possible that the scarcity of lots actually had a negative effect on single family home building activity during 2016. The available lots and those in process are just adequate for just over the next two years. For this growth to occur, all approved lots would need to be developed (Community Development Department, 2016). To supply lots for future needs, significant additional land needs to be brought forward through the platting process.

Figure 16: Single family permits in Greeley

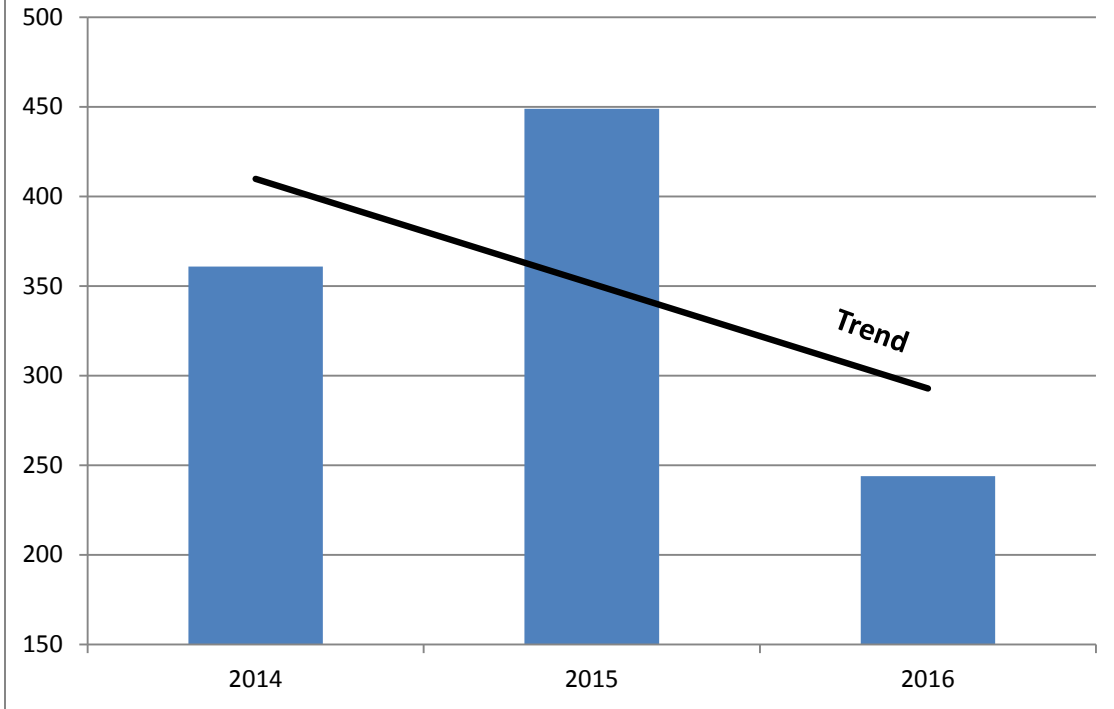


Figure 17: Permit-ready and paper lots by year

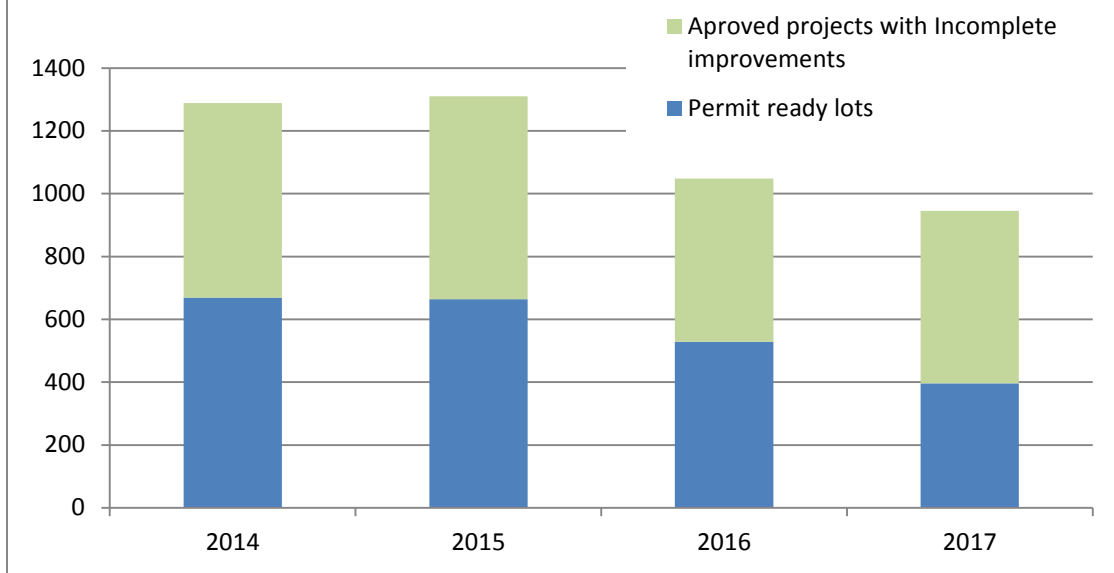


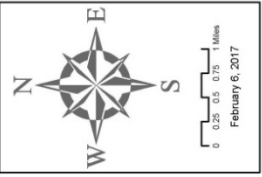
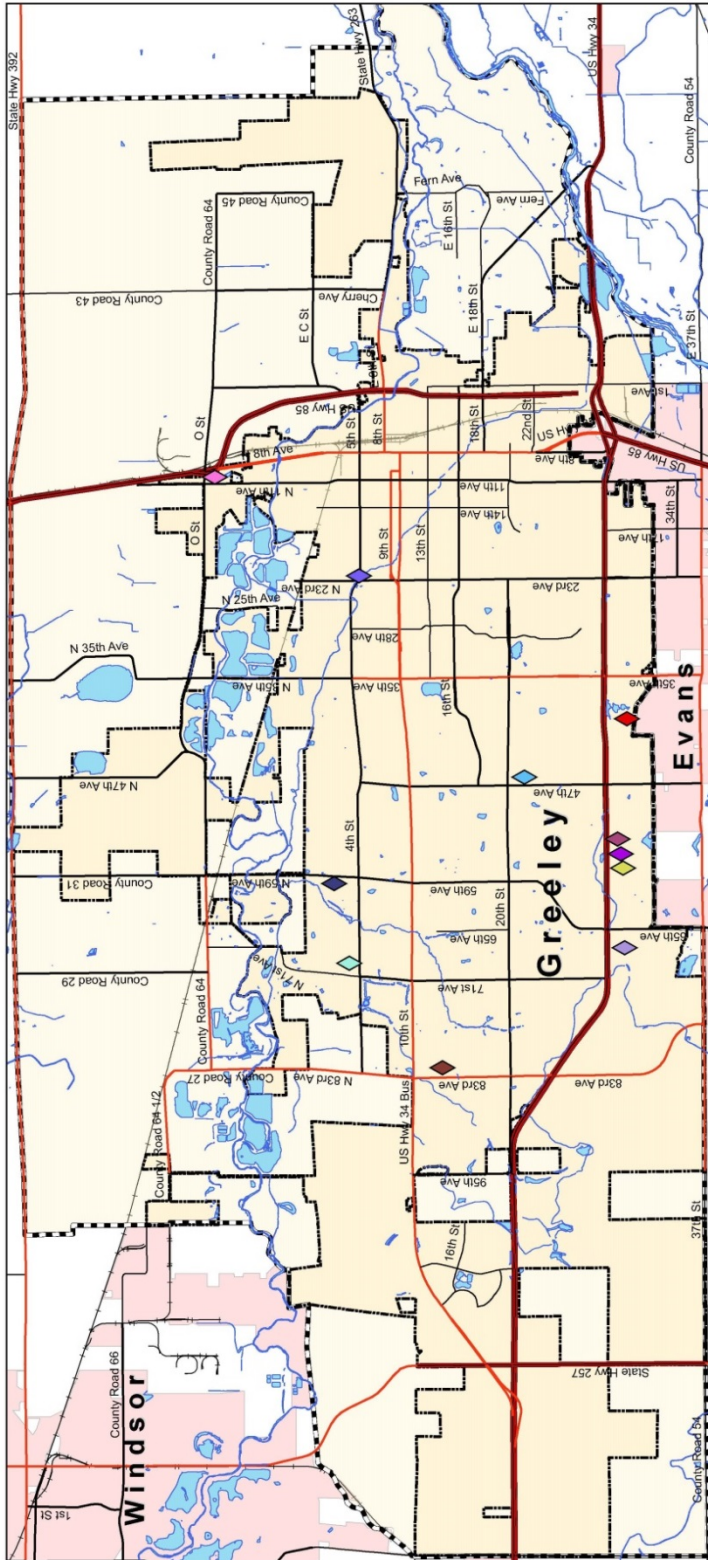
Table 9 shows that there are a total of 275 multi-family units under construction as of January 1, 2017, down from 407 a year ago. In addition, there are permit ready sites for an additional 209 additional units up from 60 a year ago. There are 100 units currently under site planning or zoning review, down from 433 in 2015. The permit ready sites and the additional multi-family sites, if they are all approved, should be sufficient for approximately one year of new multi-family units (Community Development Department, 2016).

Table 9: Multi-Family Units in Process

| Project | Location | Units Under Construction | Permit-Ready Units | Units Being Planned | Total |
|---|--|---------------------------------|---------------------------|----------------------------|--------------|
| Homestead Phase IV | North of 29th Street, Approx. 125' East of 39th Avenue | 82 | 0 | 0 | 82 |
| Saint Michaels Town Center Phase I | 6720 29th Street | 33 | 0 | 0 | 33 |
| Mission Village | 2239 5th Street | 50 | 0 | 0 | 50 |
| Summer Park | SEC of 71st Avenue and Grizzly Drive | 24 | 22 | 0 | 46 |
| Renaissance at Fox Hill | 4672 20th Street Road | 0 | 25 | 0 | 25 |
| Porter House Apartments | South of 29th Street, Approx. 600' West of 53rd Avenue | 0 | 0 | 100 | 100 |
| The Reserve | 5770 29th Street | 72 | 0 | 0 | 72 |
| Guadalupe Apartments | 1442 N. 11th Avenue | 0 | 47 | 0 | 47 |
| Boomerang Ranch 2nd Filing Multi-Family | SEC of 83rd Avenue and 12th Street | 0 | 48 | 0 | 48 |
| Reserve at Hunter's Cove | 6024 1st Street | 14 | 23 | 0 | 37 |
| Mountain View at West T-Bone Ranch | 5551 29th Street | 0 | 44 | 0 | 44 |
| TOTAL | | 275 | 209 | 100 | 584 |

MAP 2: Multi-Family Residential Building Permits issued in 2016

2016 Multi-Family Residential Building Permits



Summary of Multi-Family Projects in 2016

| Project | Location | Units Under Construction | Permit Ready Units | Units Being Planned | Total |
|---|---------------------|--------------------------|--------------------|---------------------|------------|
| Guadalupe Apartments | 1442 N 11TH AVE | 0 | 47 | 0 | 47 |
| Mission Village | 2339 5TH ST | 50 | 0 | 0 | 50 |
| Remembrance at Fox Hill | 4672 20TH STREET RD | 0 | 25 | 0 | 25 |
| Mountain View at West T Bone Ranch | 5551 20TH ST B20A | 0 | 44 | 0 | 44 |
| The Reserve | 5770 29TH ST BLDG 1 | 72 | 0 | 0 | 72 |
| Reserve at Hunter's Cove | 6024 1ST ST 1 | 14 | 23 | 0 | 37 |
| Saint Michael's Town Center Phase I | 6720 39TH ST BLDG 1 | 33 | 0 | 0 | 33 |
| Homestead Phase IV | 3805 39TH ST | 82 | 0 | 0 | 82 |
| Summer Park | 6911 SRDST F2 | 24 | 22 | 0 | 46 |
| Boomerang Ranch 2nd Filing Multi-Family | 8150 12TH ST | 0 | 48 | 0 | 48 |
| Porter House Apartments | 5580 39TH ST BLDG A | 0 | 100 | 0 | 100 |
| TOTAL | | 275 | 209 | 100 | 584 |

VIII Trends affecting Housing in Greeley

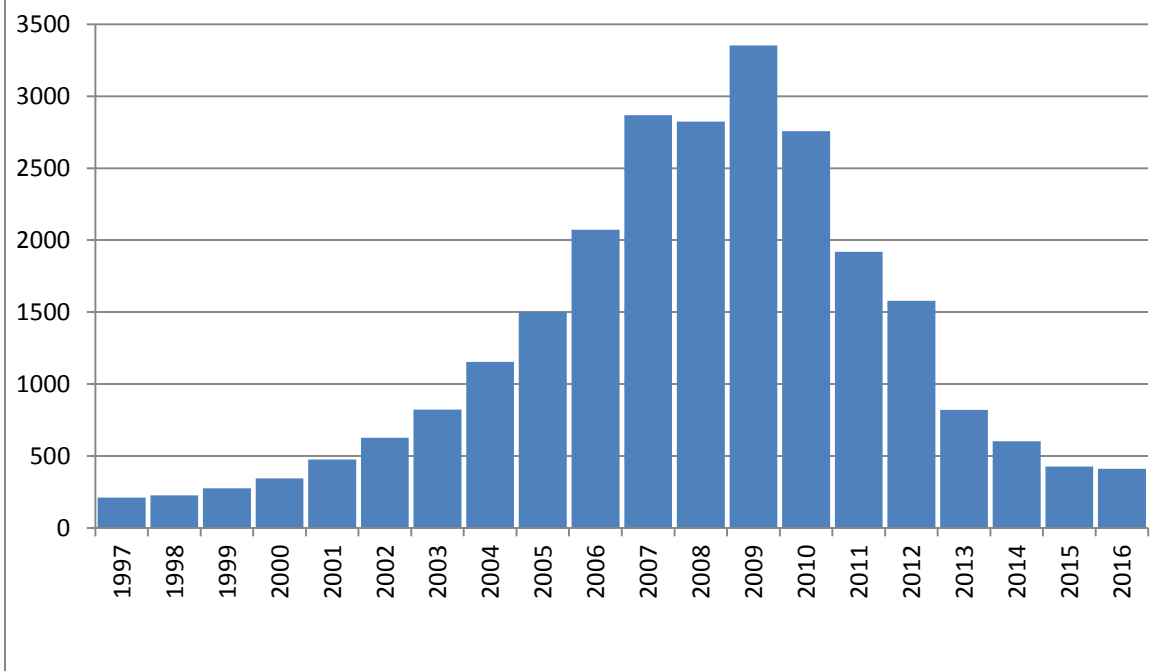
Trends that affect the number and mix of new single and multi-family residential units in Greeley include the history of foreclosures, available financing, the cost of raw water, generational changes in baby-boomers and the millennial generation, and regional growth trends.

The single-family vacancy rate has declined by 41%, from 4.9% to 2.9% (Water and Sewer Department, 2015). A healthy single-family inventory is considered to be an inventory of housing for sale equal to the demand for purchase of homes within six months (Pettigrew, 2015). The number of vacant single-family units can be used as a rough approximation of the inventory of for-sale units—some of these are vacant rental units and not for-sale, and some single-family units are for-sale but are not vacant.

Foreclosures during the Great Recession

During the Great Recession, Greeley was hit hard by foreclosures. During that time, foreclosure rates and unemployment were among the highest in the state as shown in Figure 18. Since the recovery, the number of foreclosures has declined from a high of 3,354 in 2009 to 411 in 2016. There are a number of possible reasons for change in housing mix. One of these reasons is that financing became available for multi-family developments sooner after the Great Recession than for single-family developments. In addition, because of the large number of foreclosures and tighter banking regulations, banks were slow to resume lending for single-family mortgages. In addition, many families who had lost their homes to foreclosure could no longer qualify for mortgages either because of low credit scores or the loss of down payment from the sale of their former home. Many families who lost their homes through foreclosure often became tenants in rental housing.

Figure18: Weld County Foreclosures by Year

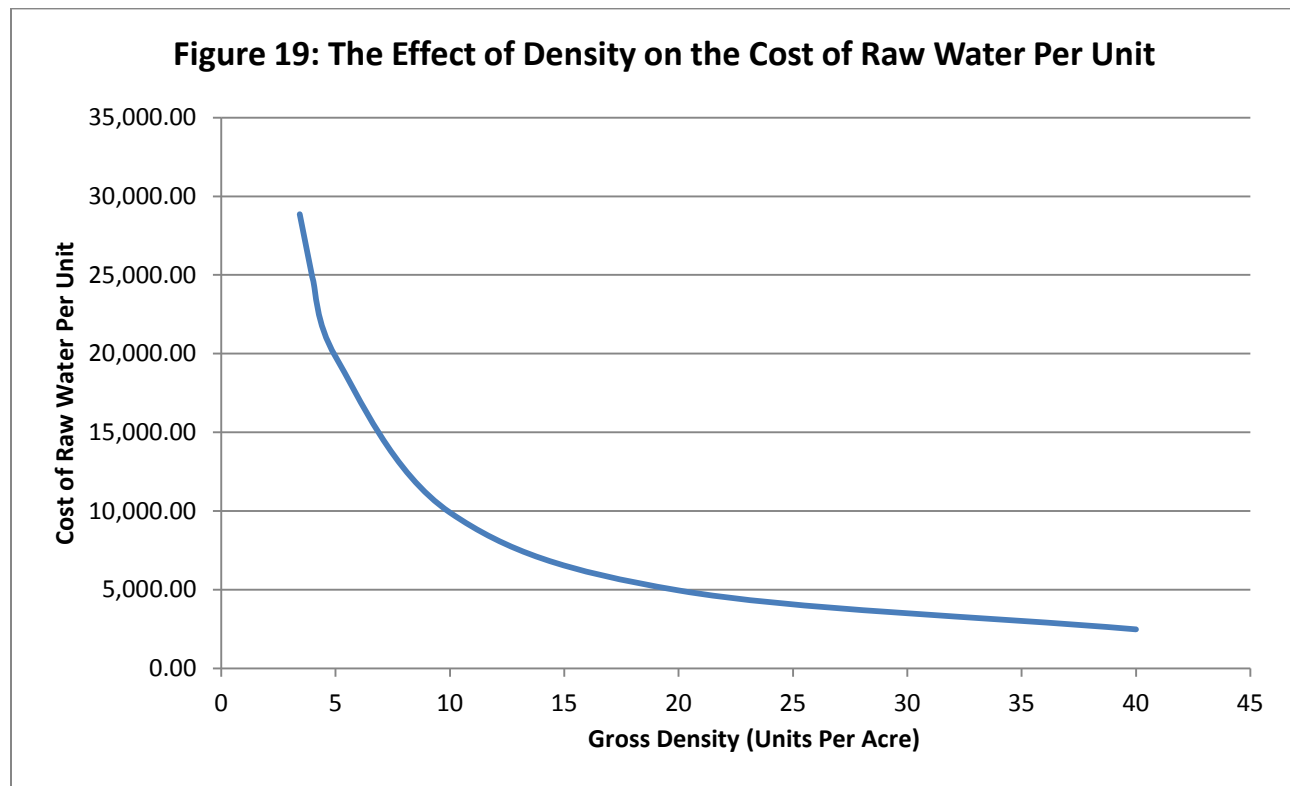


The Cost of Raw Water and Housing

New housing pays for water service in two ways: 1) plant investment fees that pay for the “buy-in” of the new housing unit to existing facilities to store, treat, and transmit water; and, 2) payment for, or dedication of the raw water rights to assure that the City has adequate senior, high-quality water rights to serve its water customers. Both the plant investment fees and the cost of providing raw water cost less per unit for higher density and multi-family housing than single family housing. In Greeley, approximately 55% of treated water is used for landscape irrigation.

Water plant investment fees vary by density, reflecting the higher per-unit water use in single-family houses because of higher water use per household for landscape irrigation. During summers, over 70% of water is used for outdoor irrigation, and a significant portion of the capacity in reservoirs, treatment plants, transmission lines, and water mains is required to provide capacity for this water. The plant investment fees and water dedication requirements are mechanisms that allocate costs toward users likely to use more water. Nonetheless, these costs per unit have the impact of encouraging higher density and multifamily housing.

The price of raw water in Northern Colorado has increased dramatically between 2013 and 2015, potentially creating an impact on the affordability of newly built housing. During the last year, four changes serve to mitigate the potential impact on housing affordability in Greeley. First, the rapid escalation in the price of raw water appears to have ended, at least in the short term. In fact, the price of raw water remains at approximately \$33,000 per acre foot for the second year. During the last year, the average density of single-family subdivisions in Greeley has increased from a gross density of 3.43 units per acre to 3.96 units per acre thus lowering the raw water required for each unit based on volume per area of raw land. The increase in density reduces the impact of the price of raw water per average single-family house in Greeley by \$ 3,863 from \$28,863 to \$25,000. Two other changes are the result of policy actions the City is taking to reduce the burden of raw water dedication and use water more efficiently. Greeley is exploring options to lessen the impact of the cost of raw water dedication on housing. Fourth, Greeley recently adopted a “Landscape Policy Plan for Water Efficiency”. The City is in the process of implementing it through code changes, incentives, and education measures. One recently adopted incentive for water conservation is an innovative water budget approach in billing for water in Greeley.



To date, no projects have been developed using water rights purchased since the recent water price escalation. It appears that there is a sufficient supply of lots where water rights have

been dedicated in Greeley to meet the need for lots for approximately two years at the 2015 rate of single-family building.

Table 10: The Effect of Raw Water Price on Per Unit Cost by Gross Density

| Density (units per acre) * | Raw Water Cost Per unit |
|----------------------------|-------------------------|
| 3.43 | 28,863 |
| 3.96 | 25,000 |
| 4 | 24,750 |
| 5 | 19,800 |
| 10 | 9,900 |
| 20 | 4,950 |
| 40 | 2,475 |

* The average gross density for single-family lots available in Greeley during 2014 was 3.43 units per acre and during 2015 and 2016 was 3.96 units per acre.

The increase in water price appears to be driven by projections of continued high growth in Northern Colorado municipal and industrial demand. As more conversion of agricultural water to municipal and industrial use takes place, there is less available water suitable for this conversion. Continued raw water price escalation can be expected to affect the market for new housing. Raw water is paid for in the price of new single-family homes and in the rent paid for rental units.

Generational trends in baby boomers and millennials

The socio-economic status of potential home buyers has also shifted significantly—in part because of the Great Recession and partly because the changes in lifestyle aspirations of the baby-boomer generation and millennial generations. Many baby boomers are remaining in the workforce longer than their parents because they may not have saved enough to support a retirement lifestyle, because they may not wish to give up a career they have invested in so heavily, or they may feel uncertainty about the future.

Throughout American history, each generation has been significantly different than their parents in important characteristics, including attitudes, expectations, education, and aptitudes. The latest generation to come of age is the millennial generation. While far from uniform, this generation is the most highly educated and most technologically skilled in history.

While they are the most educated and high tech-savvy generation in history, many of them are heavily burdened by debt from higher education. In addition, many of them delayed obtaining drivers' licenses, preferring instead to build urban lifestyles around walking, cycling, social interaction, in rich, high density, mixed-use neighborhoods that are rich in diverse restaurants, culture, and other amenities.

Regional Economy

The economy of Northern Colorado can be divided into two parts: 1) science, technology, and information; and 2) oil and gas and agriculture. These two sectors are affected by different trends and must be analyzed differently (Shields, 2015).

Growth in the science, technology, and information sectors has been strong since the Great Recession and remains so. This growth is expected to continue for the next several years. Many jobs in these sectors pay well and workers in these industries can often afford upscale homes. Many of these workers have a strong preference for significant community amenities such as natural areas, and trails, and walkable communities with bicycle transportation networks and mass transit and they are willing and able to pay premium housing prices to live in these communities (Shields, 2015) (Leeds School of Business, 2015) (Wobbekind, 2016).

New federal Administration

Forecasts for economic activity under the new federal administration range from optimistic to pessimistic depending on what happens with trade policy, immigration policy, healthcare, environmental regulation, and banking and financial regulation. Earlier forecasts that had shown a slowing in growth after the election have generally been revised upward.

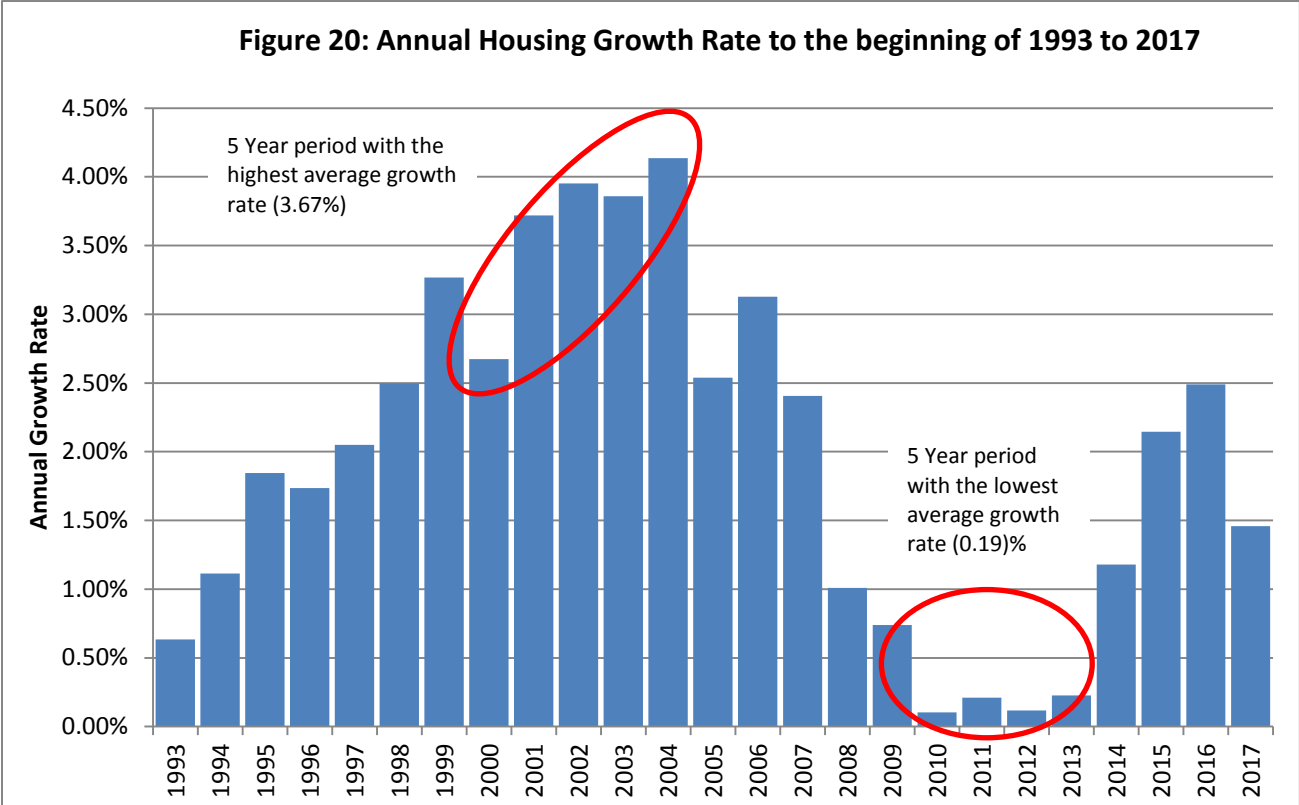
Growth in Northern Colorado is expected to be similar to 2016 in the 2% to 2.5 % range. This growth is likely to continue because of Northern Colorado's diversified economy more than because oil and gas will recover (Wobbekind, 2016).

Trends that could impact growth and development in Greeley include those that could affect the regional economy, such as continued growth in the technology sector, trends in agriculture, continued uncertainty in the oil and gas industry, and factors affecting the mix of single and multi-family housing. Factors affecting the mix of single and multi-family housing include apparent lifestyle preferences of the Millennial Generation, and the availability of financing, and the high cost of raw water.

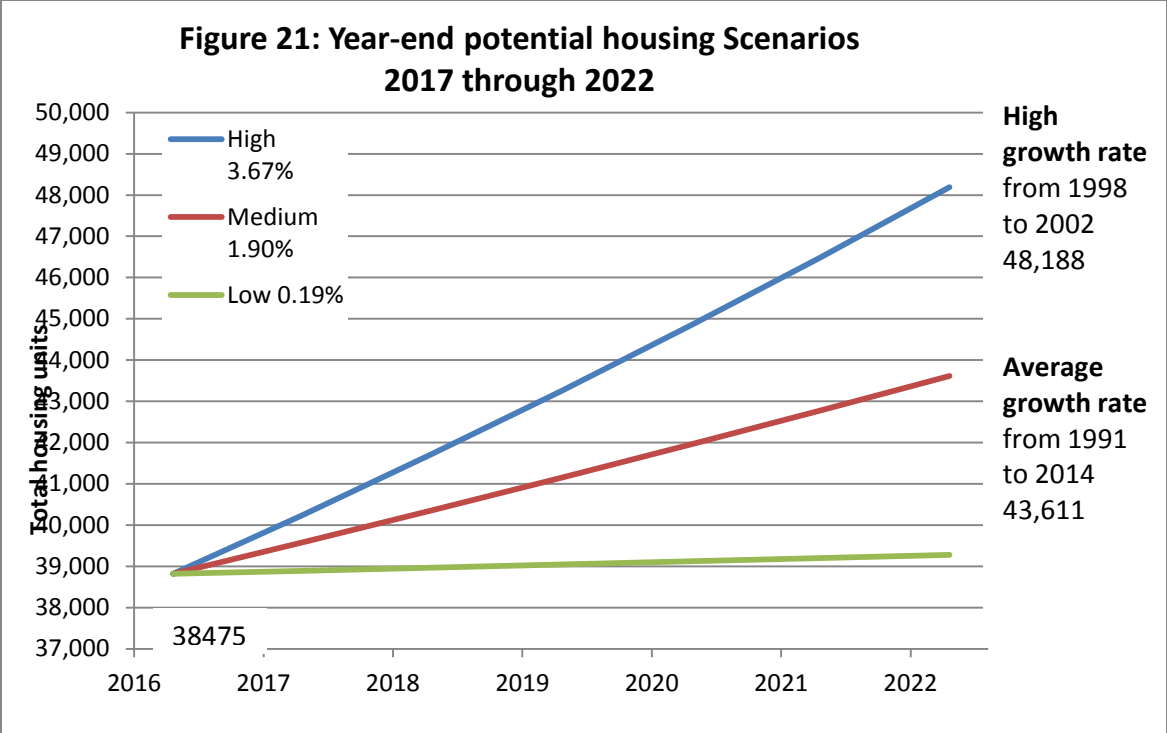
According to the State Demographers Office, Colorado is expected to have the fourth fastest growth rate and be eighth fastest in terms of absolute population growth of any state. Most of this growth will occur along the Front Range (Leeds School of Business, 2016).

IX Potential Scenarios and Growth Projections

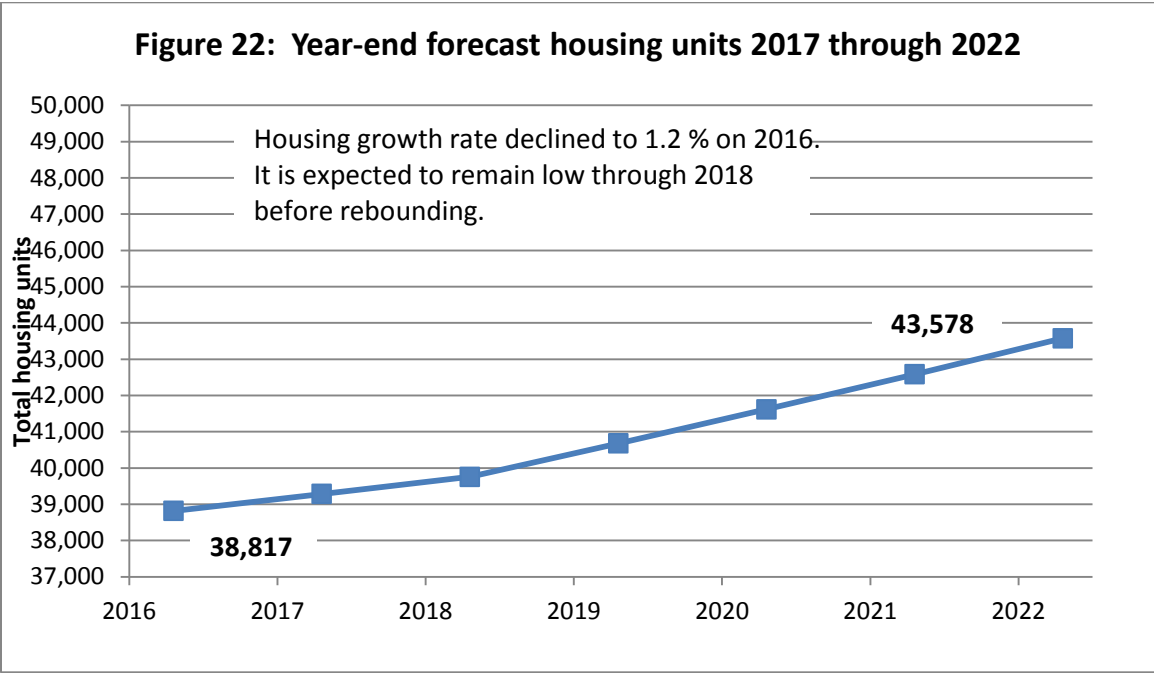
Between 1991 and 2016, growth rates ranged from a low of 0.12% to a high of 4.14% as shown in Figure 20. The distribution of these growth rates is highly bimodal with lower growth rates occurring during and immediately following recessions and higher growth rates occurring during recovery periods.



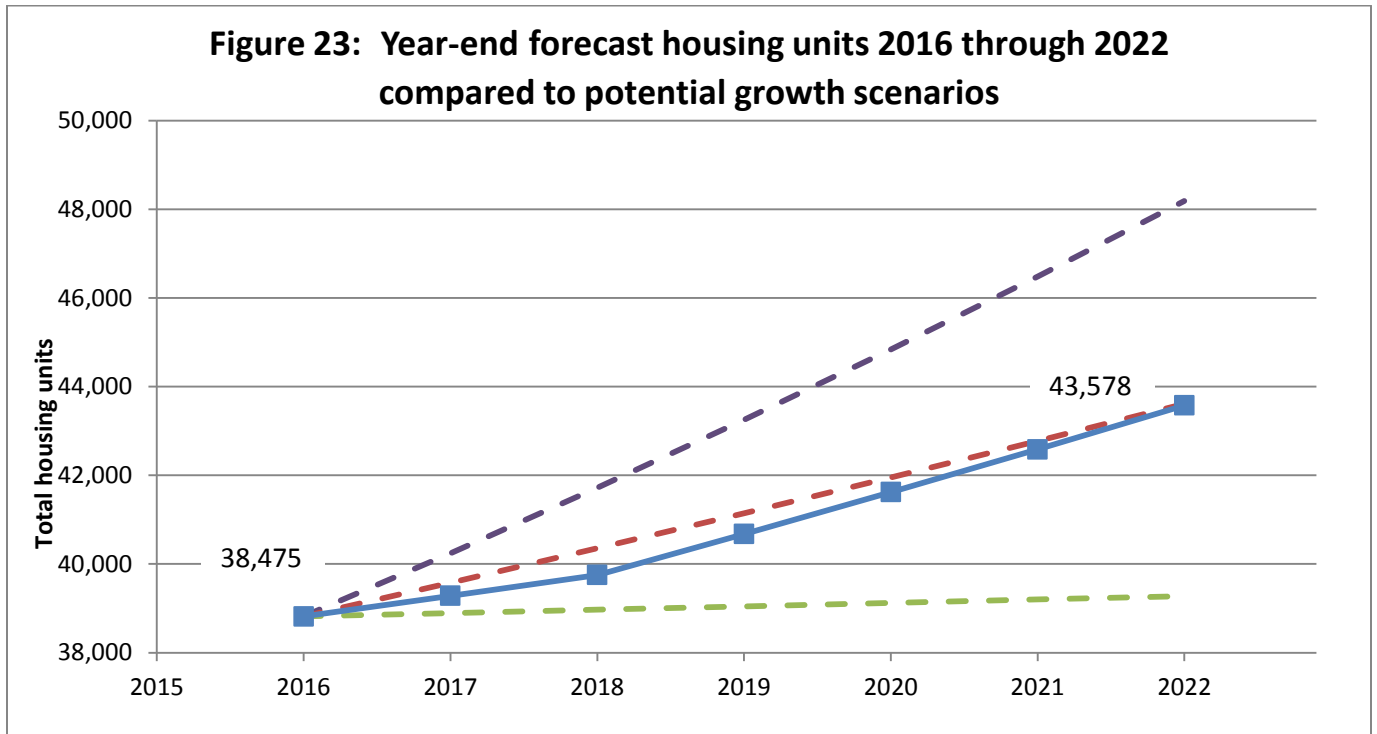
Additionally, strong growth after the Great Recession was driven by energy development, especially during 2013 and 2014. Although oil and gas employment remained steady through January, 2015, the oil and gas price drops and volatility lead to a 60% drop in drilling rigs operating in Weld County. Because many of the oil field workers employed in Weld County had relocated to this area, there is potential for negative energy employment effects to impact the real estate and housing markets.



We had anticipated a decline in residential building permits in Greeley to begin during 2017, with 2016 being having had an increase in residential building permits. Instead the decline appears to have begun in 2016 with a 38% drop in permits from 2015. Trends that may be driving this recent decline are discussed above. So far, there is no reason to expect these trends to contribute to a permanent slowing of Greeley’s growth rate.



We anticipate growth will rebound to its historic 1.9% average rate per year by 2022 based in historic fluctuations in the residential growth rate as shown in Figure 15.

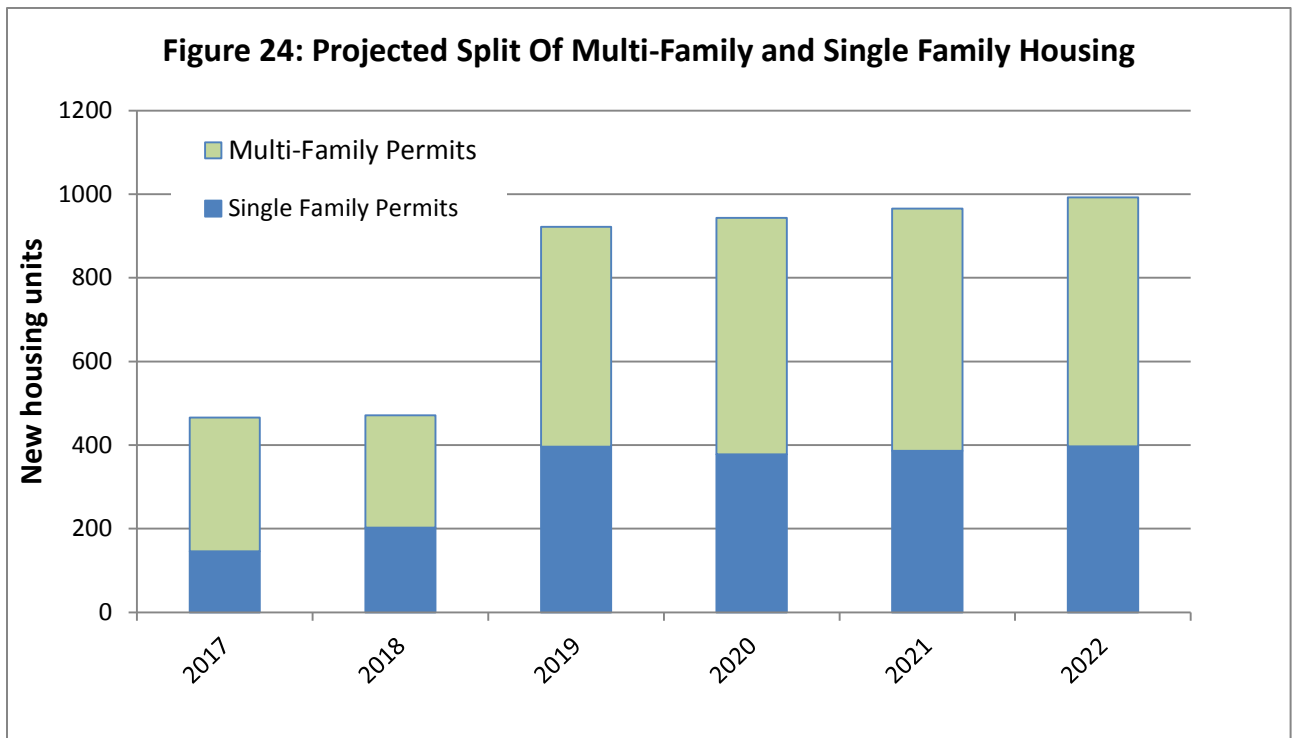


It is anticipated that the trend toward higher density multi-family housing that began during the most recent recovery will continue as raw water available for conversion to urban uses becomes scarcer and more expensive.

Table 11: Projected Split Of Multi-Family and Single Family Housing

| | Total New Housing Permits | Single Family Permits | Multi-Family Permits |
|------|---------------------------|-----------------------|----------------------|
| 2017 | 466 | 146 | 320 |
| 2018 | 471 | 203 | 269 |
| 2019 | 922 | 397 | 526 |
| 2020 | 944 | 377 | 566 |
| 2021 | 966 | 386 | 579 |
| 2022 | 992 | 397 | 595 |

It is expected that trends in place will continue as they have since 2012. Long term diversification of Northern Colorado’s economy is expected to continue, and this has, and will continue to have, a positive effect on Greeley. It is anticipated that much of the pent up demand for housing should be addressed after 2018. As land with water already dedicated is absorbed and single-family housing becomes less affordable, market forces will likely mean that a higher proportion of these housing units will be multi-family because of the lower cost per unit of raw water and tap fees.



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