2016 ANNUAL GROWTH AND DEVELOPMENT PROJECTIONS REPORT

Prepared in Support of the Capital Improvement Planning Process

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Executive summary

The Annual Growth and Development Projections Report estimates new residential 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 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.

Within the Greeley/Weld County Metropolitan Statistical Area (MSA), the civilian labor force grew by 11.43%, and the number of employed people also jumped by 11.80%, both the highest in the state for the second year in a row. At the same time, the unemployment number and rate both declined, although less substantially than in previous years as the Greeley MSA approached full employment.

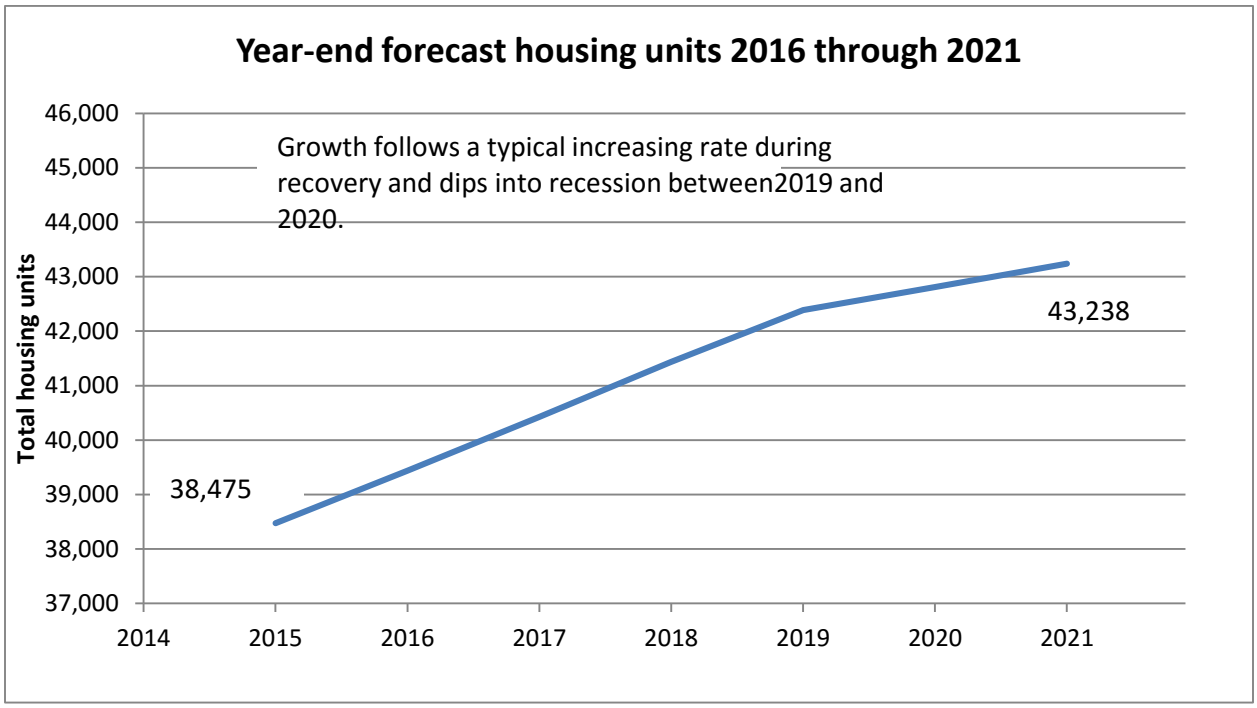
At the current rate of building, 449 single-family dwellings per year, the current activity in platting and development of lots appears to be sufficient to maintain an adequate flow of lots for the next two and one-third years. For this level of growth to occur, however, all approved lots would need to be developed (Community Development Department, 2016). To supply lots for future needs, additional land needs to be brought forward through the platting process.

There are a total of 275 multi-family units under construction as of Feb. 1, 2016, 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. At the rate of 534 new multi-family units projected for this year, the permit ready sites and the additional multi-family sites, if they are all approved, should be sufficient for this year's demand for new multi-family units (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.

Despite the continued price declines in oil throughout 2015 to below $30.00 per barrel, Greeley experienced an annual growth rate in residential permits of 2.51% and a population growth rate of 1.97%, even higher than in 2014. This speaks of the growing diversity of the Greeley and Front Range economy. If current trends continue throughout the next five years without a recession, then a continued growth rate averaging around 2% to 2.5% is likely. It is expected

that trends in place will continue as they have since 2012. Unless other trends driven by unforeseen events decline significantly, Greeley's growth rate is not likely to be affected. 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 900 and 1,000 permits for new housing units to be issued during each of the next three years. 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 for these areas.



Projected Split Of Multi-Family and Single-family Housing			
	Total New Housing Permits	Single-family Permits	Multi-Family Permits
2015	941	449	492
2016	986	452	534
2017	1011	464	547
2018	953	390	563
2019	424	90	334
2020	428	95	333

I Introduction

The Annual Growth and Development Projections Report estimates how much new residential development will occur in the near future within the City of Greeley, Colorado. The report 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.

Greeley grew significantly in 2015 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. Building activity continued to grow in 2015, although the increase in new residential units was less than that for 2014.

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.

II Methods

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 2015 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

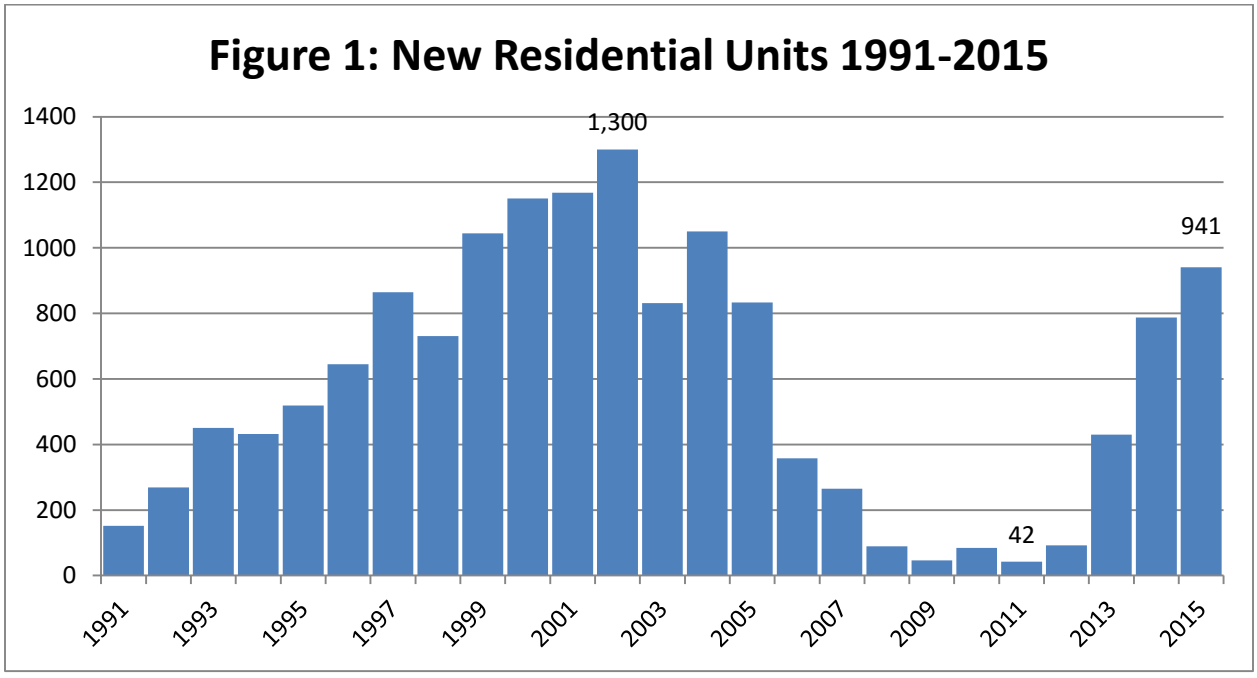
The third step is to prepare an inventory of permit-ready lots and lots in the review process that will likely become permit-ready within the forecast period.

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.

III Residential Growth

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 1 shows 25 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 2004, 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. During that time, foreclosure rates and unemployment were among the highest in the state. 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. In 2015, there were 941 permits issued for new residential units (Community Development Department, 2015).

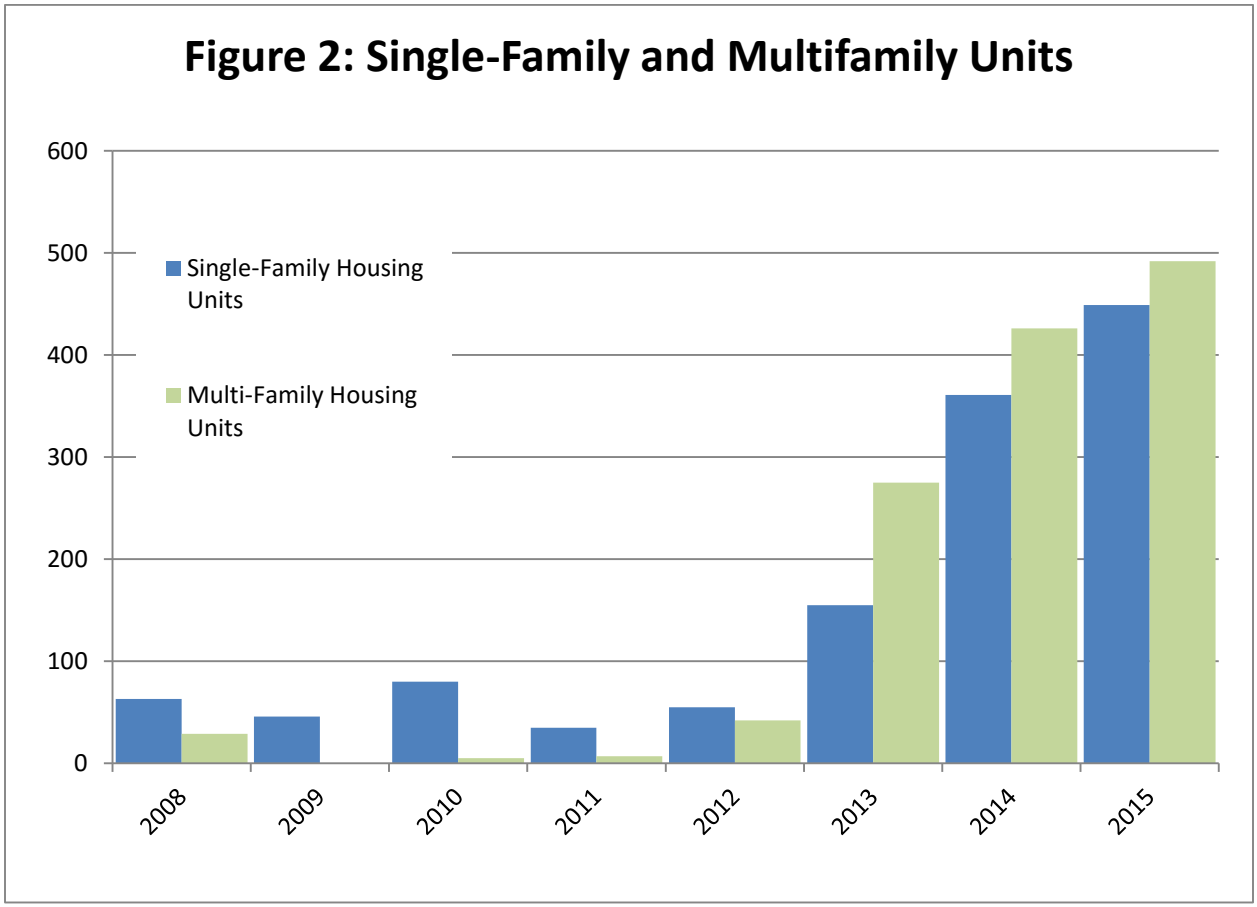


Mix of single and multifamily units

Since 2012, most of the new home construction consisted of multifamily units as shown in Table 1 and Figure 2. 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 1: 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	361	426	787
2015	449	492	941



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,

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.

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.

The socio-economic status of potential first-time buyers has also shifted significantly—in part because of the Great Recession and partly because of changes in lifestyle aspirations. The Millennial Generation, while by no means uniform, is substantially different than its parents or even than the generation between. While they are the most educated and tech-savvy generation in history, many of them are heavily burdened with higher education debt. Additionally, many of them delayed obtaining drivers' licenses, preferring instead urban lifestyles built around walking, cycling, and mass transit as the primary modes of local transportation. Many of this generation prefer multi-family housing in urban mixed use neighborhoods that are rich in diverse restaurants, outdoor eating areas, and other amenities.

Table 2 Housing Vacancy Rates

Year	Multi-Family Vacancy Rate	Single-family Vacancy Rate
2010	8.6%	4.9%
2011	5.6%	4.5%
2012	4.6%	4.1%
2013	3.3%	3.3%
2014	3.6%	3.0%
2015	5.0%	2.9%

Table 2 and Figure 3 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.

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.

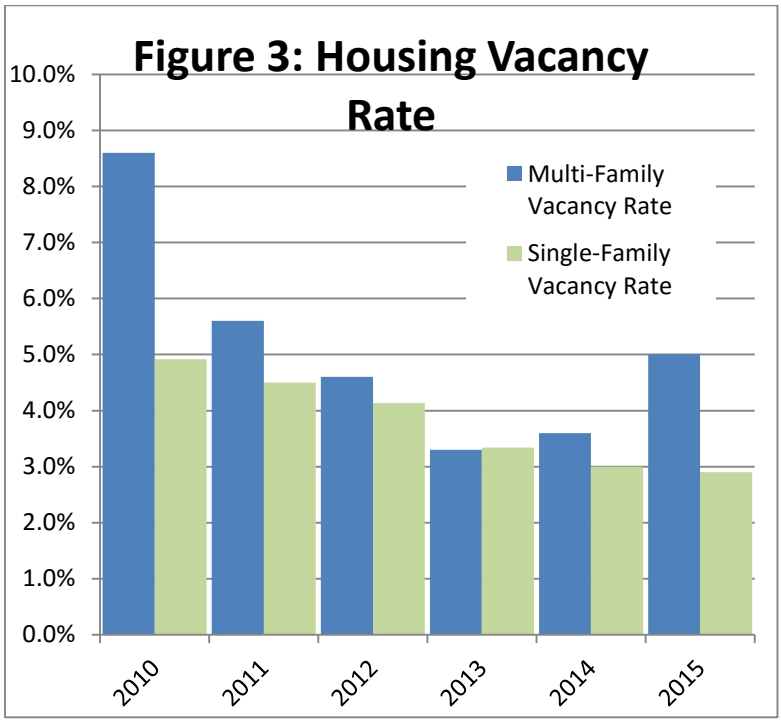


Table 3: Change in Housing Activity 2008-2015

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	787	83.0%	1	788	37,532	0	37,532	2.14%
2015	941	19.6%	0	941	38,473	7	38,466	2.51%

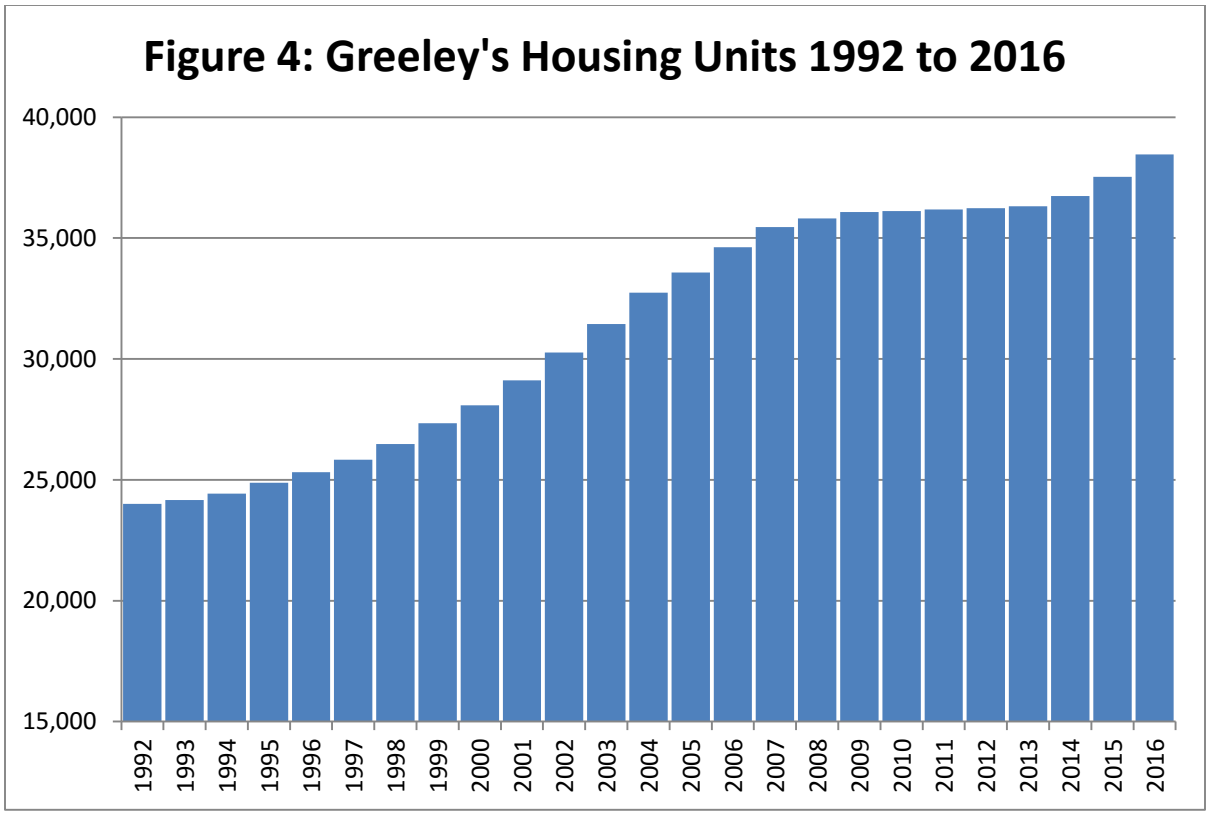


Figure 4 shows that the total housing stock plus building permits and annexations and subtracting demolitions has increased from 24,012 to 38,475 between 1992 and January 2016.

V Population estimate

Since 1991, Greeley's estimated population has grown 58.9% from 64,832 to 103,037 people. Figure 5 shows Greeley's population growth from 1992 to 2015. The growth rate has fluctuated between 0.10% and 4.13 %, averaging 1.9% and with a standard deviation of 1.06%.

Table 4: 2016 Population Estimate

Year	SFD	SFDocc	MFD	MFDocc	AHS	UP	Population
2016	24,787	0.95	13,774	0.971	2.7	3347	103,037
2015	24,338	0.971	13,282	0.964	2.7	2671	101,048
2014	23,976	0.967	12,856	0.0967	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	0.0914	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)
Estimated Population = [(SFD x SFDocc) + (MFD x MFDocc)] x AHS + Up

Figure 5: Population 1992-2015

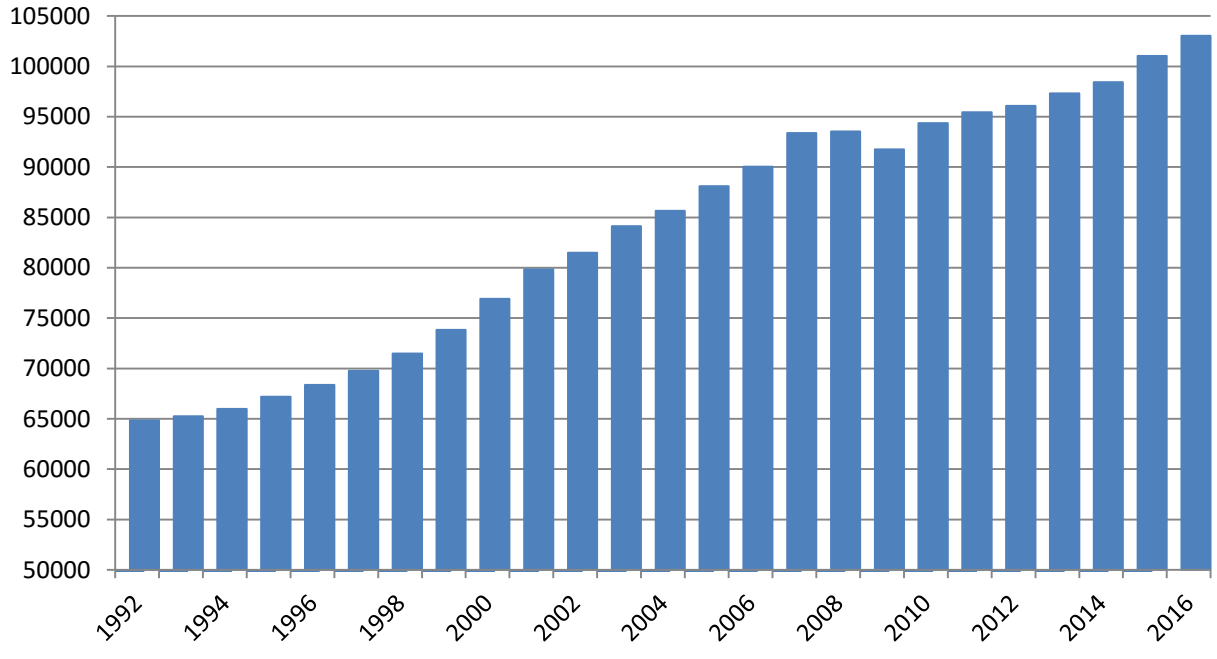


Figure 5 shows the annual estimated population between 1992 and 2016

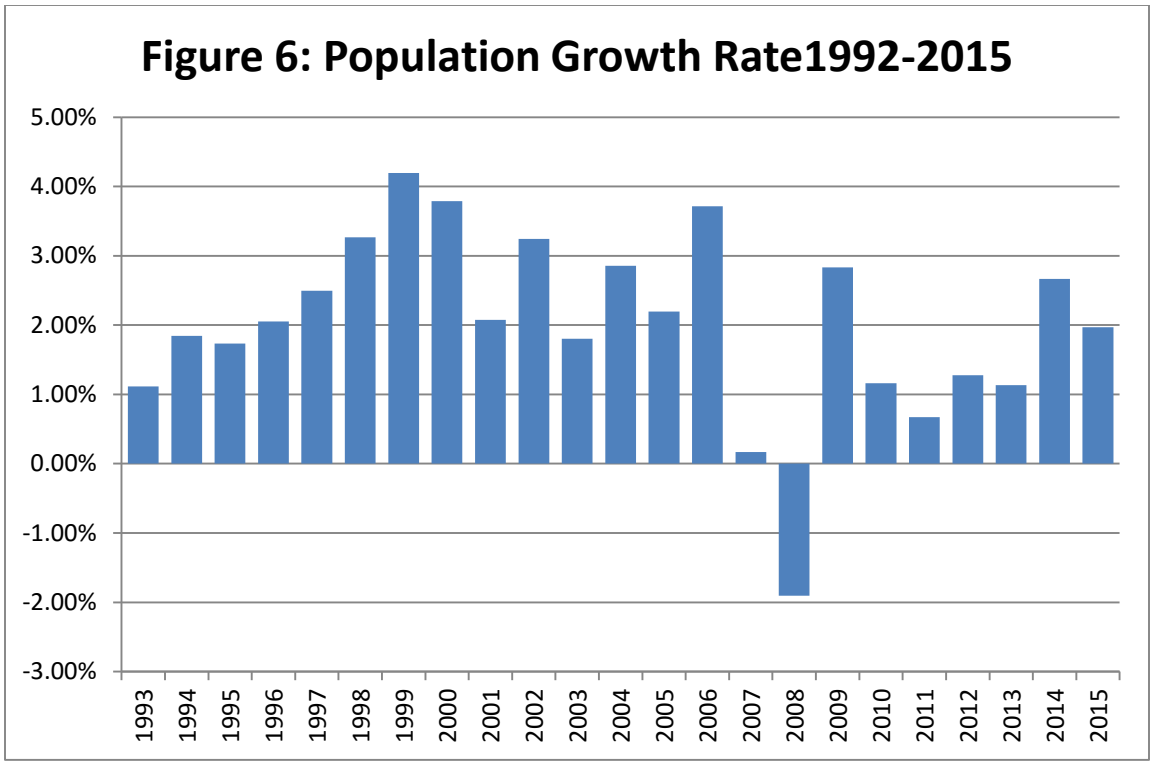


Figure 6 shows that the total population growth rate has varied between -1.91% and 4.20% between 1992 and January 2016.

V Employment

Employment continues to improve slowly throughout Colorado, but significantly more in Northern Colorado. The civilian labor force grew by 0.07% statewide, while the Greeley MSA, which includes all of Weld County, civilian labor force grew by 11.97%, the highest of any Metropolitan Statistical Area in the state as shown in Table 5.

Table5: Employment Statistics for Colorado MSAs December 2015

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	174,620	-5.61%	170,017	-5.89%	4,603	-21.92%	2.6%	-13.33%
Colorado Springs	310,580	1.41%	298,147	2.05%	12,433	-20.78%	4.0%	-21.57%
Denver - Aurora	1,493,995	2.43%	1,445,314	2.85%	48,681	-14.56%	3.3%	-15.38%
Fort Collins-Loveland	179,670	-3.81%	174,156	-3.68%	5,514	-7.98%	3.1%	0.00%
Grand Junction	72,369	-4.70%	68,373	-6.28%	3,996	16.23%	5.5%	17.02%
Greeley	**151,469**	**11.97%**	**146,259**	**12.51%**	**5,210**	**-0.53%**	**3.4%**	**-12.82%**
Pueblo	71,750	-3.39%	68,130	-3.78%	3,620	-13.58%	5.0%	-12.28%
Colorado Totals	**2,808,816**	**0.07%**	**2,715,650**	**1.21%**	**93,166**	**-22.99%**	**3.3%**	**-19.51%**

(Colorado Department of Labor and Employment, 2016)

The total number of employed people also increased, with a statewide growth of 1.21% statewide and 12.51% in the Greeley MSA, also the highest in the state. At the same time, the unemployment number and rate declined significantly.

Table 6 shows the year-over-year comparison of employment in the Greeley MSA (Colorado Department of Labor and Employment, 2016). It shows significant increases in the size of the workforce and total number of persons employed, as well as significant decreases in the number of unemployed persons and the unemployment rate. The 11.97% increase in the civilian labor force includes immigration to the Greeley area, commuting from outside the Greeley area, and people returning to the labor force who were not included in recent

reporting. Examining the growth in the Greeley labor force when compared to the surrounding Metropolitan Statistical Areas 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 6: Year to Year Greeley MSA Employment Comparison

	Dec. 2012	Dec. 2013	Dec. 2014	Dec. 2015
Civilian labor force	119,038	124,178	134,817	151,469
Number Employed	108,261	115,507	128,851	146,259
Number unemployed	10,777	8,671	5,555	5,210
Unemployment Rate	9.1%	7.0%	3.9%	3.4%

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VI 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 7 shows the inventory of developed and final platted single-family lots as of the end of 2013 through 2015. Single-family lots are rapidly being absorbed and built upon. With the increase in home building in 2015, several subdivisions were approved through final platting, developed and had many homes completed. The net change in available

Table 7: Potential Single Family Units Based on Buildable Lots

Approval Status	Single Family Lots		
	2013	**2014**	**2015**
Approved projects with infrastructure installed (permit ready)	656	651	509
Created via demolition since 2012	13	13	20
Total Permit Ready Lots	**669**	**664**	**529**
Approved Projects with incomplete infrastructure	620	646	519
Net Permit ready Lots + Platted Lots	**1289**	**1310**	**1048**

Permit ready lot growth	-0.75%	-20.33%
total lot growth	1.63%	-20.00%

lots between 2014 and 2015 is a 20% decrease in both total lots and finished lots. At the end of 2014, 664 developed lots remained available for builders. By the end of 2015 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. At the current rate of building, 449 single-family dwellings per year, the current activity in platting and development of lots appears to be sufficient to maintain an adequate flow of lots for the next two and one-third years. For this growth to occur, all approved lots would need to be developed (Community Development Department, 2016). To supply lots for future needs, additional land needs to be brought forward through the platting process.

MAP 1: Residential Building Permits issued in 2015

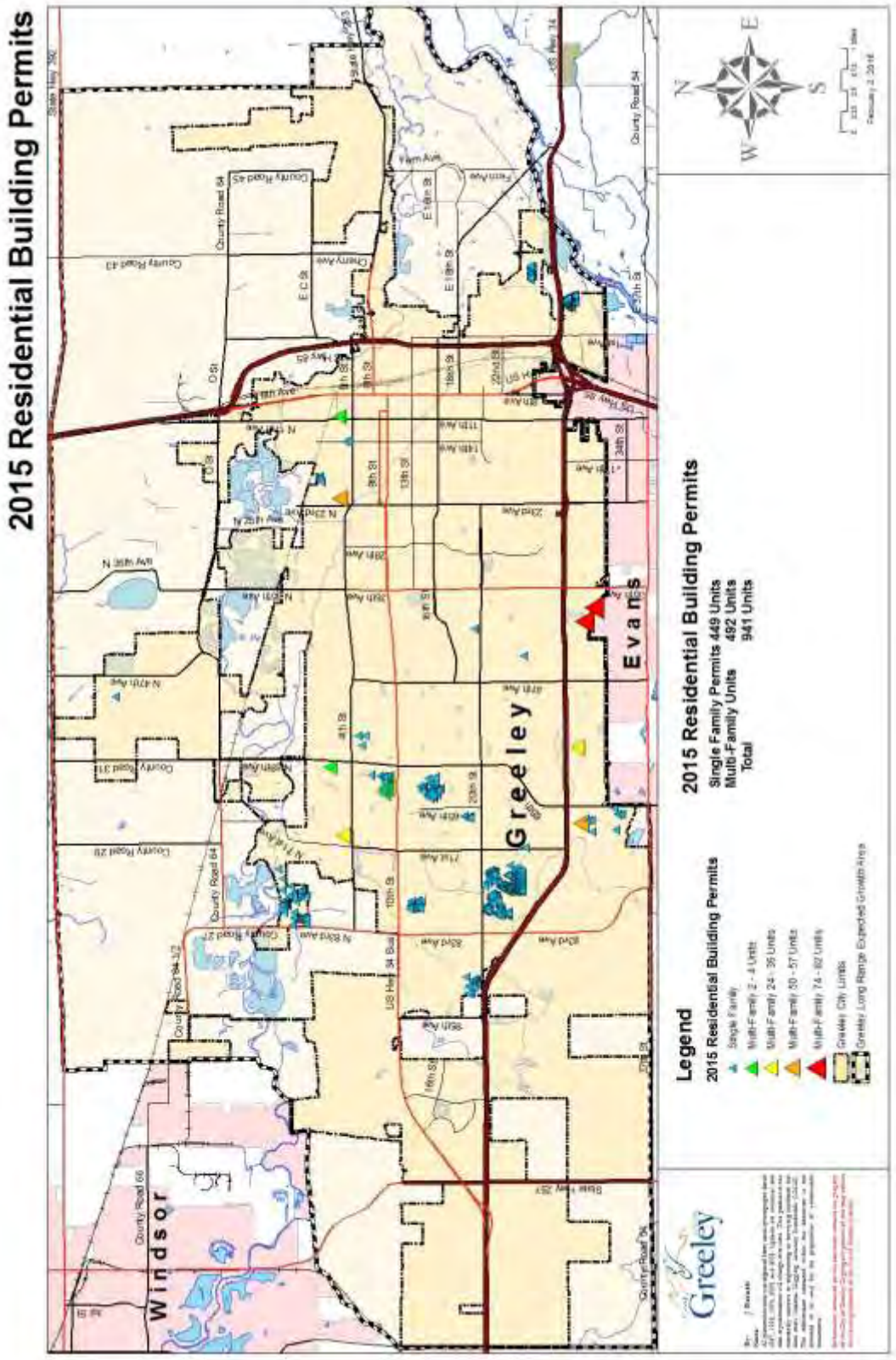


Table 8 shows that there are a total of 275 multi-family units under construction as of Feb. 1, 2016, down from 407 a year ago. In addition, there are permit ready sites for an additional 209 additional units up from 60 a year ago. There are 100 units currently under site planning or zoning review, down from 433in 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 8: 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**

VII Trends

Growth in Northern Colorado is expected to be slightly lower than for 2015 but still 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, uncertainty after several years of growth 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, the slow recovery from the Great Recession, 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 (83%) will occur along the Front Range. During 2016, Colorado is expected to add approximately 65,100 jobs (Leeds School of Business, 2016).

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).

Agriculture

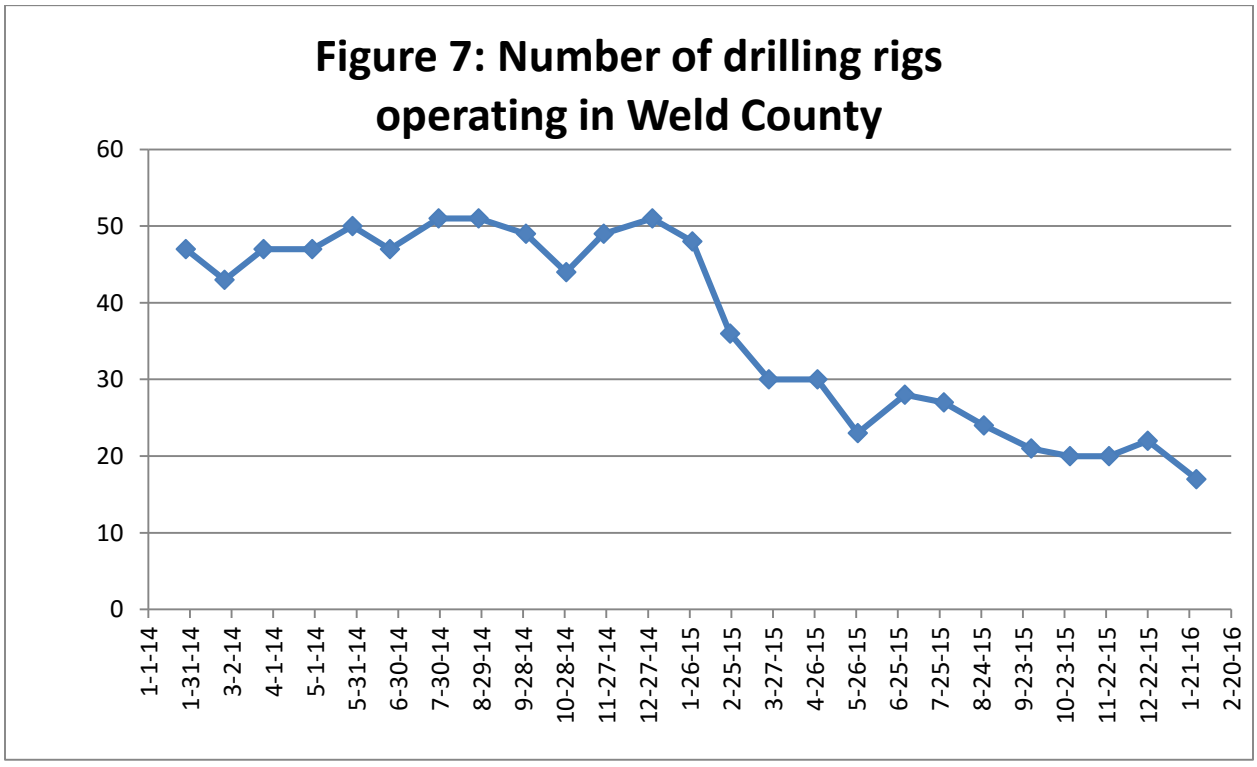
Weld County is the ninth most productive agricultural county in the United States and the most productive outside California in terms of the value of agricultural products produced (Bureau of the Census, 2012). While crop production is a significant portion of this value and is an important support of 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).

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. As can be seen in Figure 7, 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 17 in January of this year (Colorado Oil and Gas Conservation Commission, 2015).



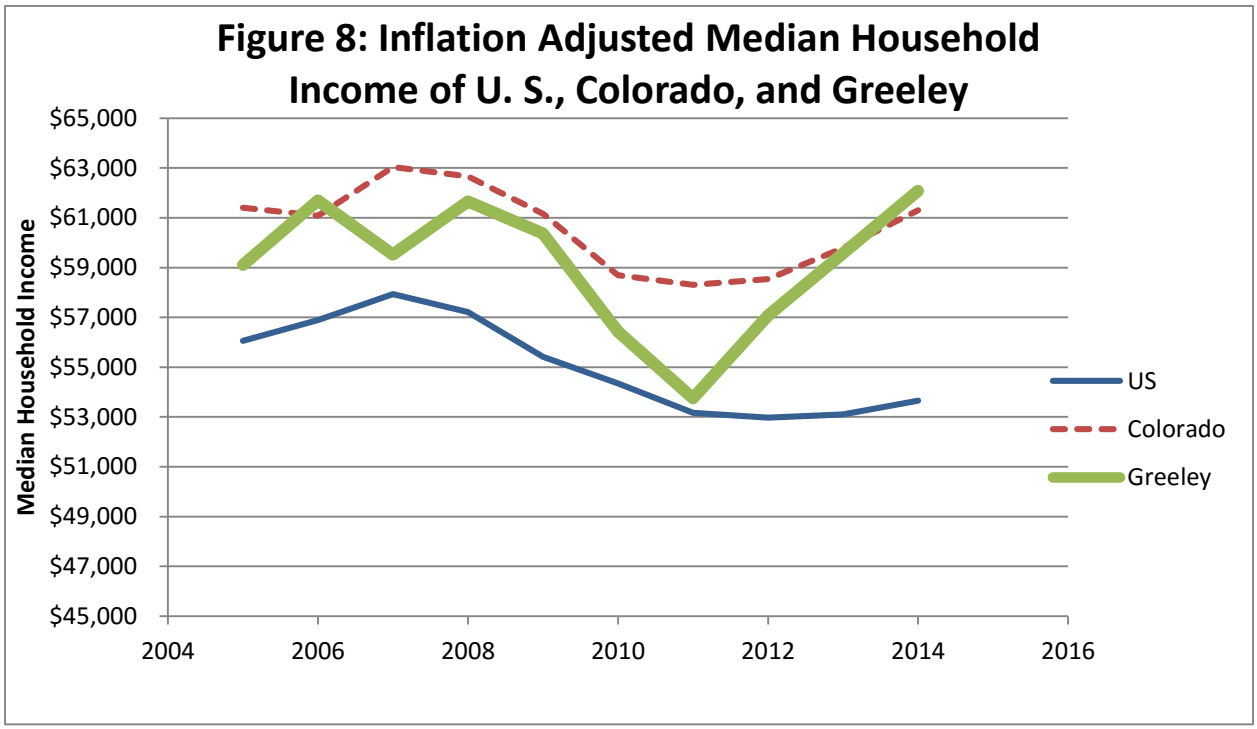
Since the drilling and fracking of each well employs approximately 100 to 125 people. (Shields, 2015), the reduction of 30 active drilling rigs represents the loss of 3600 to 3750 jobs that pay well above the median income. This is not yet reflected in the median household income statistics since those are only available through 2014.

Preferences of the millennials

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. Many of them graduated from college with significant debt. Because many have had high stimulation early in life, many prefer rich urban environments.

Long term U. S. real wage trends

Figure 8 shows the inflation adjusted median household incomes for the U. S., Colorado, and Greeley from 2005 through 2014. 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 only slightly to $53,657 in 2014 (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 $61,303 in 2014. Greeley's real median household income adjusted for inflation peaked in 2006 and again in 2008 at $61,696 and 61,649, respectively, and declined 12.9% to $53,748. Since then it has reached $62,083, 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 8, 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. How this decrease in drilling activity will affect Greely's median household income will not be known before the release of 2015 household income data.

Cost of raw water

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 (See Table 11); 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.

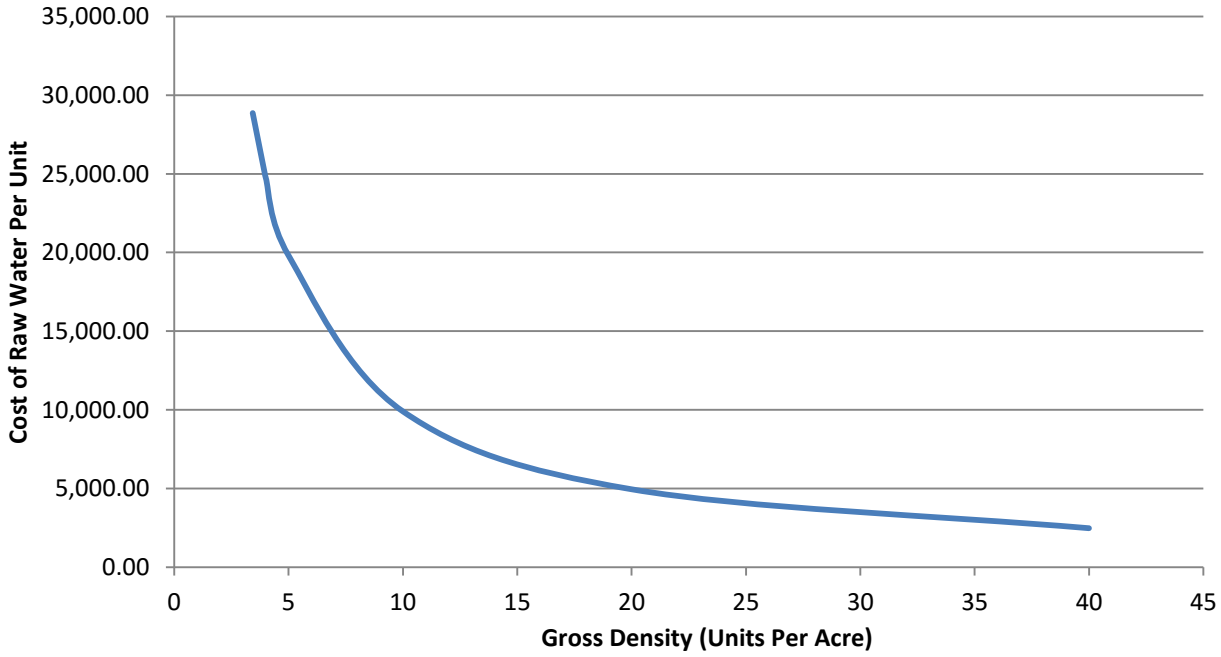
The price of raw water in Northern Colorado has increased dramatically between 2013 and 2015, potentially creating an impact on the affordability of newly built housing. During the last year, several changes served to mitigate the potential impact on housing affordability in Greeley. First, the rapid 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.

As a result of study in 2015 of the City's raw water dedication and in-lieu payment rates, other changes have been taken 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, including adopting policies allowing for dedication based on designation of non-irrigated (or partially-irrigated) outlots during subdivision, resulting in a net acreage dedication versus gross.

Greeley also recently completed an update to its Conservation Plan and separately adopted a "Landscape Policy Plan for Water Efficiency." The City is in the process of implementing these through code changes, incentives, and education measures.

Figure 9:The Effect of Density on the Cost of Raw Water Per Unit



To date, no major housing 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.

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.

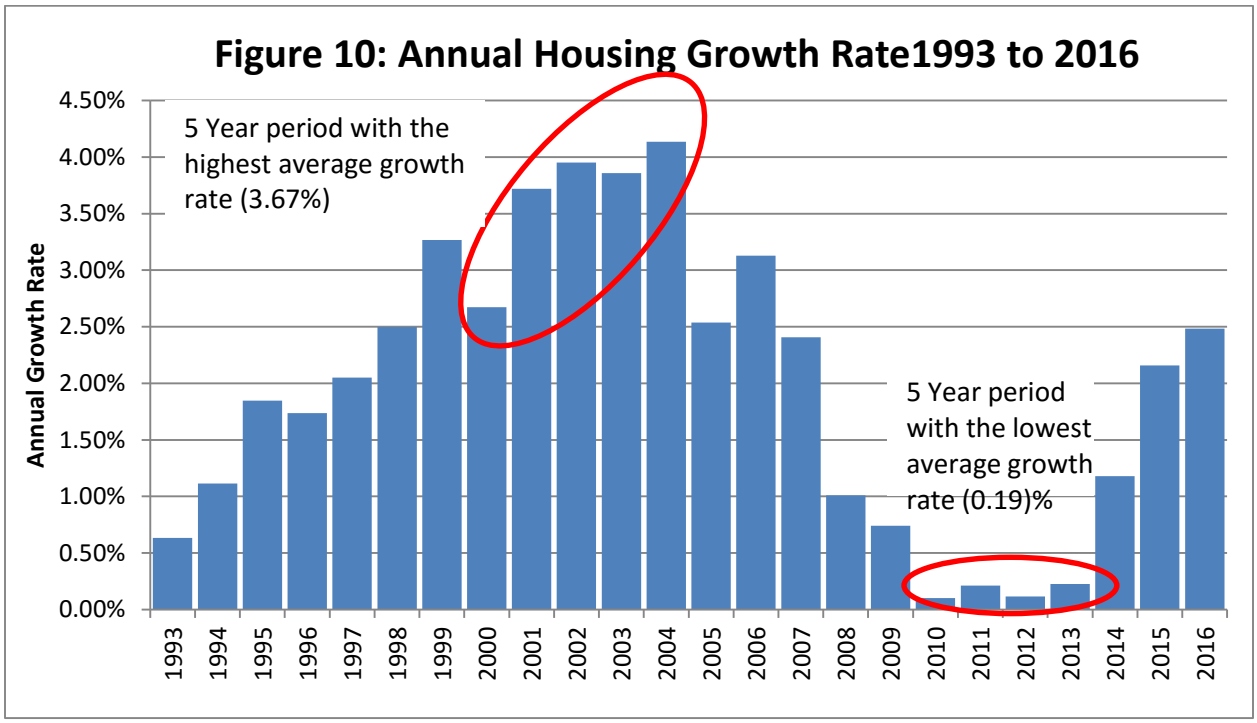
Table 7: The Effect of Raw Water Price on Per Unit Cost by Gross Density

Density *	Raw Water Cost Per unit
3.43	28,862.97
3.96	25,000.00
4	24,750.00
5	19,800.00
10	9,900.00
20	4,950.00
40	2,475.00

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

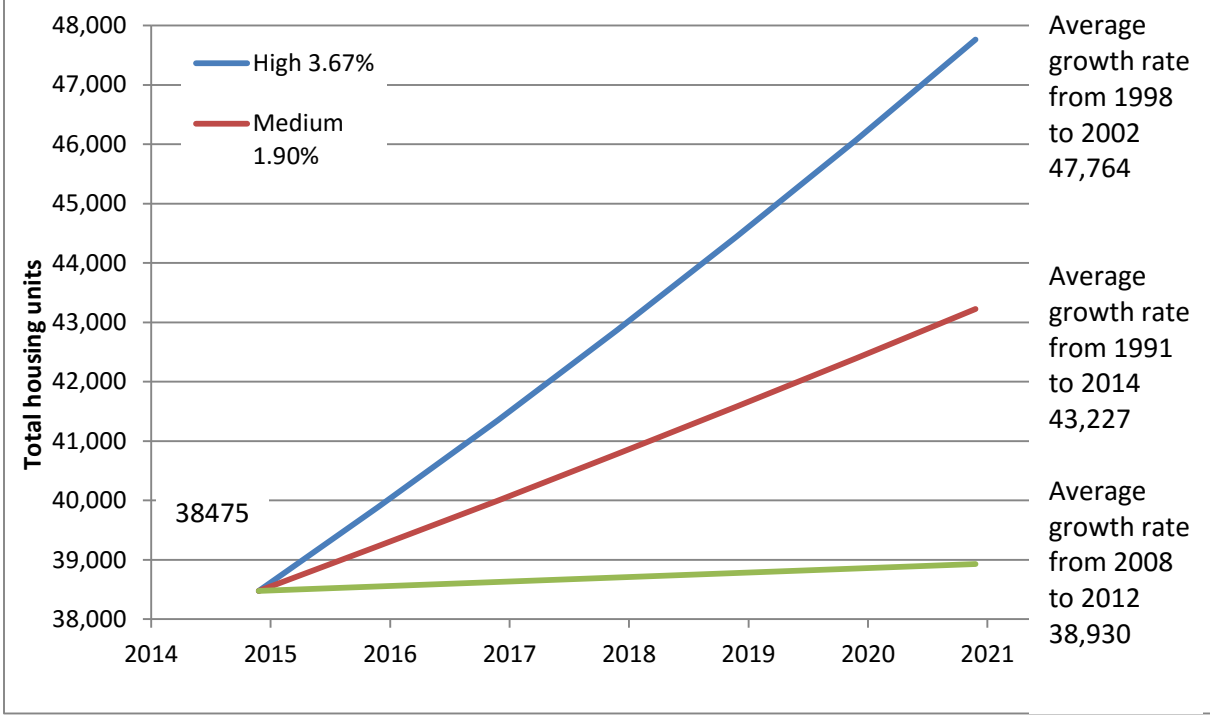
VIII Projections

Between 1991 and 2015, growth rates ranged from a low of 0.12% to a high of 4.14% as shown in Figure 12. 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.



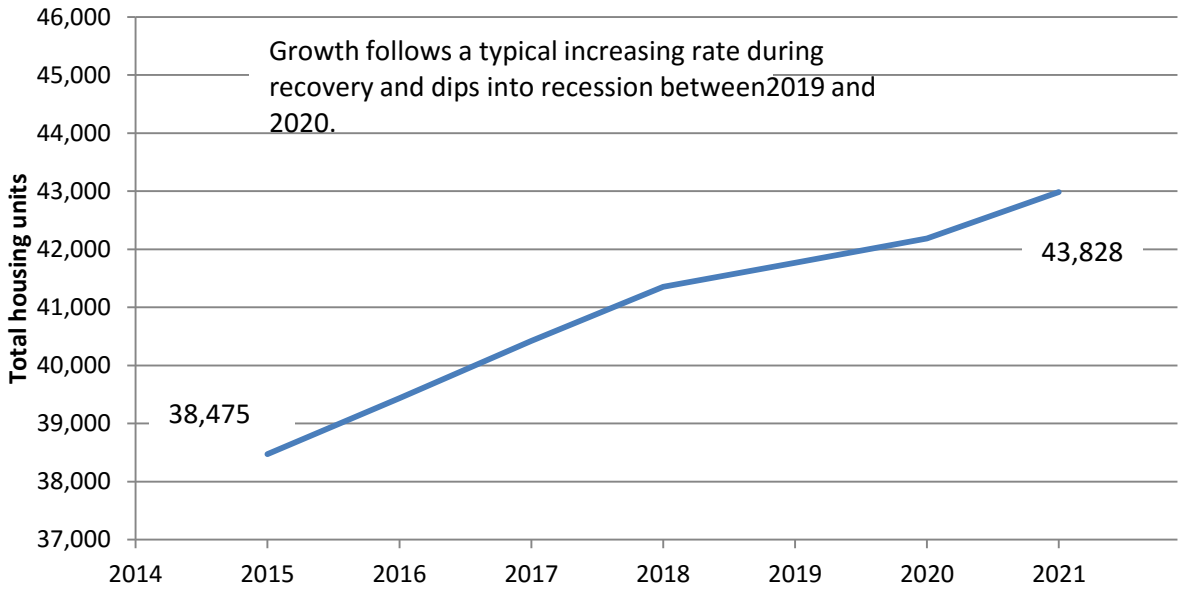
Additionally, strong growth after the Great Recession was driven by energy development, especially during 2013 and 2014. Although oil and gas employment remained steady through January, 2015, the oil and gas price drops and volatility lead to a 60% drop in drilling rigs operating in Weld County. Because 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.

Figure 11: Year-end potential housing Scenarios 2015 through 2021



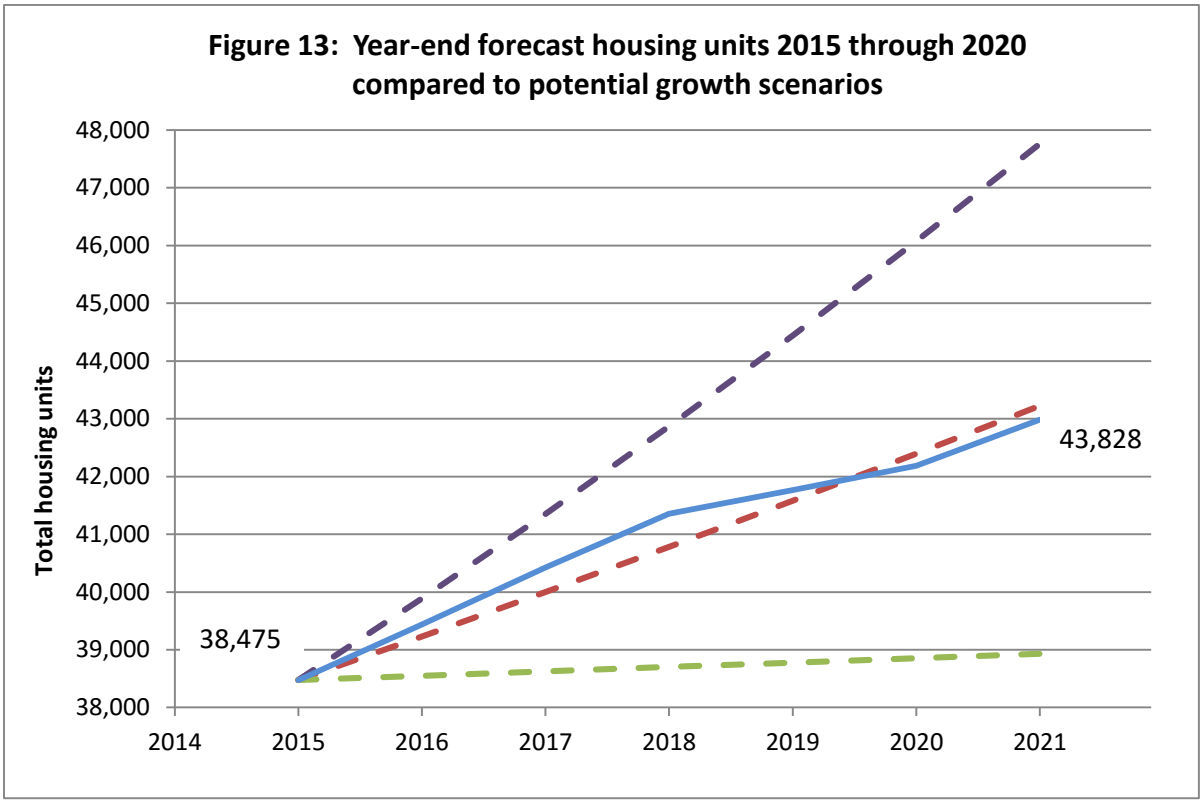
We anticipate that continued growth in the range of 2% in 2016 to 2.5% in 2017, before dropping to approximately 1% in 2019.

Figure 12: Year-end forecast housing units 2016 through 2021



This would be consistent with the slow recovery currently underway. Figure 15 shows that this growth rate would result in an average growth rate over the next five years consistent with both the continuing recovery and the broad and robust growth in Northern Colorado.

Figure 13: Year-end forecast housing units 2015 through 2020 compared to potential growth scenarios



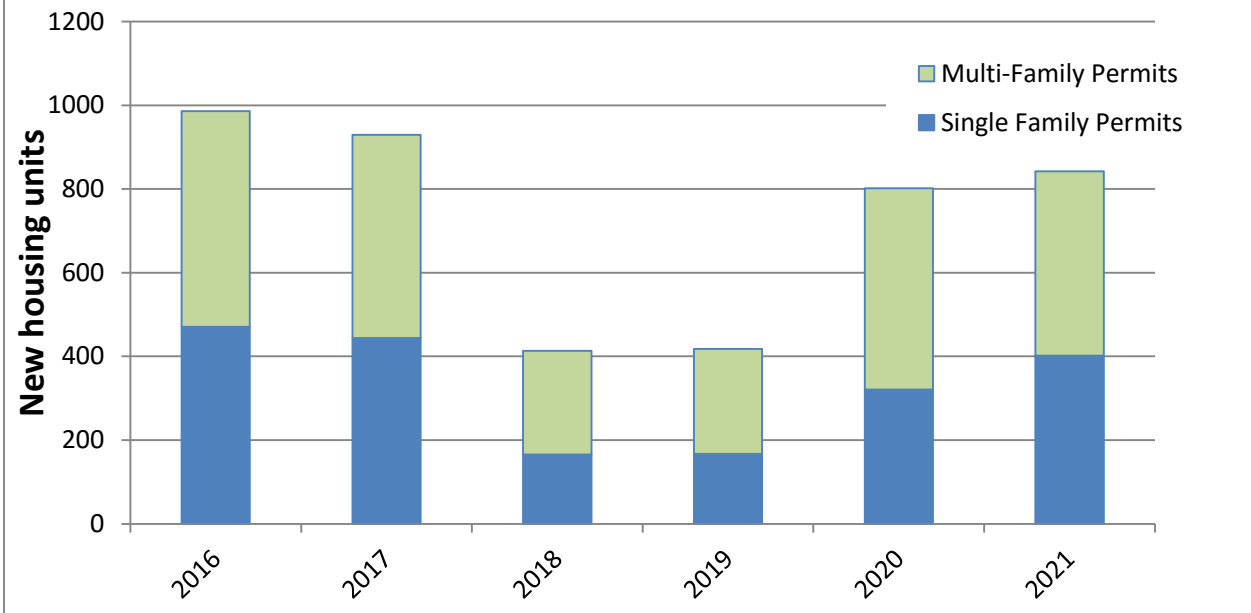
Per this projection, new home construction by year over this period would be as shown in Table 11.

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

	Total New Housing Permits	Single Family Permits	Multi-Family Permits
2015	941	449	492
2016	986	470	515
2017	930	444	486
2018	414	165	248
2019	418	167	251
2020	801	321	481
2021	843	402	441

It is expected that trends in place will continue as they have since 2012. Unless oil prices decline much more than they already have, Greeley's growth rate is not likely to be affected. 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 900 and 1,000 permits for new housing units to be issued during each of the next three years with a recession or leveling-off of the growth rate sometime before 2020. It is anticipated that much or the pent up demand for housing should be addressed during this time. 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.

Figure 14: Projected Split Of Multi-Family and Single Family Housing



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