2018 ANNUAL GROWTH AND DEVELOPMENT PROJECTION 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 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 exceeded the number of single-family units since 2013. In 2016, building permits were issued for 244 single-family homes and 333 multi-family units for a total of 577 residential units. In 2017, building permits were issued for 349 new dwellings, of which 111 were single-family and 238 were multi-family.



Between 1991 and 2015, growth rates ranged from a low of 0.12% to a high of 4.13%. 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.

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.





Figure E-4: New Multi-Family Housing Permits 2015-2017



Figure E-5: Forecast New Units Permitted 2018-2023 1200 1140 1109 1078 1020 1000 800 569 600 423 400 200 0 2017 2018 2019 2020 2021 2022 2023 202

Greeley experienced a 39.5% drop in permits issued for new residential units in 2017 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 contrary 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 potential return to higher rates in 2019 possibly as metropolitan district funding of development projects is implemented. 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 over 500 permits for new housing units to be issued during 2019 and thereafter except for a short recession likely in 2019 or 2020.

Table Single	E-1: Projected -family and M	able E-1: Projected Split between Single-family and Multi-Family Permits									
	Total New Housing Permits	Single Family Permits	Multi-Family Permits								
2018	569	199	370								
2019	1020	408	612								
2020	423	191	233								
2021	1078	485	593								
2022	1109	443	665								
2023	1140	456	684								

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.

While the housing stock increased by 1.15%, the population increased by 2.03%, indicating a lowering of



vacancy rates and a tightening in the housing supply. In addition, the average household size increased from 2.7 to 2.71 persons in 2012. The 2018 estimated population of Greeley is 104, 857 of which approximately 37% is Hispanic and 10.6% is foreign-born.

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I INTRODUCTION

The Annual Growth and Development Projection Report provides estimates of how much new residential development will occur from 2018 through 2022 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) Other factors that have the potential to affect expected trends.

After permits were issued for 941 new residential units in 2015, during 2016 there were 577 permits issued for new residential units (a 38.7% drop), (Barnett, 2017). Only 349 permits were issued in 2017, an additional drop for the second year in a row of 39.4%. During this same time, the remainder of Northern Colorado saw significant growth from year to year in new residential permits. 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 newer 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 three-step analysis used to help inform the City's Capital Improvements Plan (CIP) and as a general resource for other City departments and the public and businesses at large, a mechanism for meeting the service and infrastructure needs of future development while maintaining existing service levels and managing community resources. Through the CIP, the City also estimates development fee revenue that may be available to meet growth demands. City departments recommend projects that 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.

<u>Step 1</u>

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 2017 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 this time frame. 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 on the assumption that growth in any five-year period will fall between the historic high and low.

<u>Step 2</u>

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, 2017), 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.

<u>Step 3</u>

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 2-1 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, 2017). In 2016, there were 577 permits issued for new residential units and 349 in 2017.



The drop in permits from 2015 to 2017 is not caused by a decline in the economy since most other Northern Colorado jurisdictions saw a continuation of permit growth consistent with what Greeley

experienced from 2013 through 2015. Rather, this drop is caused by factors unique to Greeley as set forth in Chapter VI of this report. These include a lack of available financing tools for development, the timing of when certain costs of development must be paid and how these costs are carried, the cost of raw water, and the lack of planning for new K-12 schools in Greeley's growth areas. These issues are being addressed through several initiatives and potential changes in 2018 that may lead to significant increases in projected residential building permits during the next several years.

Mix of single and multifamily units

Greeley's historic mix of single and multi-family housing has remained relatively constant at between approximately 65% and 66% in the years leading up to 2012. Beginning in 2002, over half of new construction has consisted of multi-family housing to the extent that the overall percentage of single family housing has declined by 1.82% from a high of 65.39% in 2012, to 63.57% in 2018 as shown in Table 2-1.

Та	Table 2-1: Mix of Existing Single and Multi-Family Units 2010-2018										
	Year	SFD	%SFD	MFD	%MFD	Total					
	2018	25,021	63.57%	14,338	36.43%	39,359					
	2017	24,910	64.02%	14,002	35.98%	38,912					
	2016	24,670	64.33%	13,681	35.67%	38,351					
	2015	24,221	64.74%	13,189	35.26%	37,410					
	2014	23,976	65.10%	12,856	34.90%	36,832					
	2013	23,743	65.36%	12,581	34.64%	36,324					
	2012	23,688	65.39%	12,539	34.61%	36,227					
	2011	23,646	65.35%	12,539	34.65%	36,185					
	2010	23,570	65.27%	12,539	34.73%	36,109					

Since 2012, most of the new home construction consisted of multifamily units as shown in Figure 2-3 and 2-4. 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). Other factors that will play into both the mix and total number of residential permits include the position of multi-family housing and single-family housing in the real estate market cycle and the timing of the next recession.



Table 2-1 and Figure 2-5 show that the total housing stock plus building permits and annexations and subtracting demolitions has increased from

24,012 to 39,237 between 1992 and January 2018. It also shows the impact of the Great Recession as a flat spot during the seven years from 2008 to 2014.



Year	Housing Units at the Beginning of Year	New Residential Units Permitted	Year over year change in permits	Annual Residential Growth Rate
1991	24,012	152		
1992	24,164	269	76.97%	0.60%
1993	24,433	451	67.66%	1.11%
1994	24,884	432	-4.21%	1.85%
1995	25,316	519	20.14%	1.74%
1996	25,835	645	24.28%	2.05%
1997	26,480	865	34.11%	2.50%
1998	27,345	731	-15.49%	3.27%
1999	28,076	1,044	42.82%	2.67%
2000	29,120	1,151	10.25%	3.72%
2001	30,271	1,168	1.48%	3.95%
2002	31,439	1,300	11.30%	3.86%
2003	32,739	831	-36.08%	4.13%
2004	33,570	1,050	26.35%	2.54%
2005	34,620	833	-20.67%	3.13%
2006	35,453	358	-57.02%	2.41%
2007	35,811	265	-25.98%	1.01%
2008	36,076	89	-66.42%	0.74%
2009	36,165	46	-48.31%	0.25%
2010	36,211	84	82.61%	0.13%
2011	36,295	42	-50.00%	0.23%
2012	36,337	92	119.05%	0.12%
2013	36,429	430	367.39%	0.25%
2014	36,589	781	81.63%	0.44%
2015	37,370	941	20.49%	2.13%
2016	38,311	577	-38.68%	2.52%
2017	38,888	349	-39.51%	1.51%
2018	39,237			•



III Population Estimate

Greeley's population has been growing at a steady rate for the past 38 years with only one year of negative growth. This growth includes natural growth from reproduction as well as inmigration from other areas. Over the last 150 years, a significant portion has been immigrants coming to Greeley to work in agriculture and the food processing industries. In fact, according to the latest census figures, 10.7% of Greeley's population is made up of immigrants.

	SFD	SFDocc	MFD	MFDocc	AHS	UP	Population
18	25,021	0.975	14,338	0.986	2.71	3033	107,457
L7	24,910	0.972	14,002	0.962	2.71	3196	105,315
16	24,670	0.950	13,681	0.971	2.71	3347	103,037
15	24,221	0.971	13,189	0.962	2.71	2671	100,790
L4	23,976	0.967	12,856	0.0967	2.71	3196	98,423
13	23,743	0.967	12,581	0.954	2.71	2,900	97,320
12	23,688	0.959	12,539	0.944	2.71	2,980	96,093
11	23,646	0.955	12,539	0.0914	2.7	3,027	95,453
LO	23,570	0.951	12,539	0.914	2.7	3,090	94,358
12 11 10 ation Estir	23,646 23,570 nate Based (rate; AHS	0.959 0.955 0.951 on Modified = Average Ho	12,539 12,539 12,539 Housing Me	0.914 0.914 0.914 ethod (2010) e; UP= Unive	2.71 2.7 2.7 ersity Popu	3,027 3,090	95 95 94

Table 3-1 shows Greeley's population estimates from 2010 to 2018. Figure 3-1 shows the annual estimated population between 1992 and 2018. The annual population growth rate during 2017 was 2.03%. It should be



noted that, in 2012, the average household size increased from 2.7 to 2.71 persons. Figure 3-2 shows that the total population growth rate has varied between -1.91% and 4.20% between 1992 and January 2018. Since 1992, Greeley's estimated population has grown 65.7% from 64,832 to 107,457 people. During that time, the annual population growth rate has fluctuated between -1.9% and 4.20%, averaging 1.82% and with a standard deviation of 1.29%.



Greeley's population has more than doubled from 53,006 in 1980 to 107,457 in 2018, a period of 38 years.

Figure 3-4 shows that, since 1981, the population growth rate has averaged 1.88 % with a standard deviation of \pm 1.28%. 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 inmigration, especially when compared to portions of western Kansas and Nebraska that are



population.

losing

IV REGIONAL RESIDENTIAL PERMITS

Comparing new housing permits in Greeley to the rest of Northern Colorado helps provide insights into trends in Greeley. Figure 4-1 shows a comparison of Fort Collins, Greeley, Loveland, Windsor, Timnath, Milliken, Severance, Johnstown, and Evans residential units permitted in 2015, 2016, and 2017.





Figure 4-2 shows the percent of new residential units of the estimated 2015 housing stock in each of the selected Northern Colorado municipalities. The average percentage of the housing stock for all Northern Colorado is 6.79% while Greeley's percentage is 4.62%. Because of Greeley's high proportion of the regional population, if Greeley is removed from the sample, the average percentage of new units would be 9.03 %



Figure 4-3 shows a comparison of building permits in Northern Colorado municipalities for single-family and multi-family residential units permitted in 2015, 2016, and 2017.

The following charts break these out by each year. Figure 4.4 shows a comparison of building permits in Fort Collins, Greeley, Loveland, Windsor, Timnath, Milliken, Severance, Johnstown, and Evans for single-family and multi-family residential units permitted in 2015. 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. 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 4-5 shows a comparison of building permits in Fort Collins, Greeley, Loveland, Windsor, Timnath, Milliken, Severance, Johnstown, and Evans for single-family and multi-family residential units permitted in 2016.



Figure 4-6 shows a comparison of building permits in Fort Collins, Greeley, Loveland, Windsor, Timnath, Milliken, Severance, Johnstown, and Evans for single-family and multi-family residential units permitted in 2017.



From this year-by-year comparison, we can see that, while the total single-family permits issued in all other municipalities examined in this analysis increased by 25% over the three year period, the number of single-family permits issued in Greeley declined by 75%. This is a significant variance that needs further analysis.



Even more significant is the variance in singlefamily construction shown in Figure 4-7. While the total singlefamily permits issued in all other municipalities examined in this analysis increased by 25% over the three year period, the number of singlefamily permits issued in Greeley declined by 75%. This is a significant variance that needs further analysis.



Figure 4-9 shows the strong relationship in Northern Colorado over the last three years between the percentage of multi-family permits issued in a municipality and population. In fact, 91% of the variability in

the percentage of multi-family permits over the last three years can be explained by the population of the municipality; specifically, larger municipalities tend to have a higher percentage of multi-family housing. Three years is too short a time to prove the validity of that relationship since single-family and multi-family housing could just be at a different point in the market cycle, but it is a potential trend that bears watching.



V EMPLOYMENT AND INCOME PICTURE

Employment continues to improve slowly throughout Colorado, but significantly more in Northern Colorado. The civilian labor force grew by 3.45% statewide, while in the Greeley MSA, which includes all of Weld County, civilian labor force grew by

MSA	Civilian Labor Force	% Change over Dec. 2016	Number Employed	% Change over Dec. 2016	Number Unemployed	% Change over Dec. 2016	Unemploy- ment Rate	% Change over Dec. 2016
Boulder- Longmont	189,235	3.69%	184,553	3.64%	4,682	5.69%	2.50%	13.64%
Colorado Springs	339,603	4.17%	328,260	4.31%	11,343	0.33%	3.30%	3.13%
Denver - Aurora	1,600,008	2.55%	1,555,176	2.64%	44,832	-0.53%	2.80%	7.69%
Fort Collins- Loveland	199,940	6.92%	195,057	7.04%	4,883	2.48%	2.40%	4.35%
Grand Junction	72,505	-0.37%	69,623	0.46%	2,882	-16.85%	4.00%	-6.98%
Greeley	158,107	3.06%	153,880	3.37%	4,227	-7.06%	2.70%	3.85%
Pueblo	75,362	2.03%	72,077	2.44%	3,285	-6.06%	4.40%	2.33%
Colorado Totals	3,020,823	3.45%	2,939,449	3.99%	81,374	-12.99%	2.70%	-15.63%

https://www.colmigateway.com/vosnet/lmi/profiles/profileDetails.aspx?session=areadetail§ion=employmentWage Accessed Jan, 15, 2018

3.06%, the third highest of any Metropolitan Statistical Area in the state as shown in Table 5-1. The total number of employed people also increased, with a 3.06%,

Table 5-2: Year	Table 5-2: Year to Year Comparisons in Greeley MSA 2012-2017										
	2012	2013	2014	2015	2016	2017					
Civilian labor force	119,038	124,178	134,817	150,737	153,414	158,107					
Number Employed	Imber 108,261 115,5	115,507	128,851	145,334	148,866	153,880					
Number unemployed	10,777	8,671	5,555	5,403	4,548	4,227					
Unemployment Rate	9.1%	7.0%	3.9%	3.60%	2.60%	2.70%					

the third highest of any Metropolitan Statistical Area in the state as shown in Table 5-1. The total number of employed people also increased, with a statewide growth

		PERCENT OF BUSINESSES	# OF EMPLOYEES	PERCENT OF EMPLOYMENT	TOTAL WAGES Q2 OF 2016	PERCENT OF TOTAL WAGES	Q AVG WAGE	ANNUALIZED AVG WAGE
AGRICULTURAL/ FORESTRY/ FISHING/ HUNTING	39	1.38%	319	0.61%	\$ 2,703,466	0.49%	\$ 8,484	\$ 33,934.32
MINING-NATURAL GAS/OIL, OIL/GAS OPERATIONS/DRILLING	80	2.82%	2505	4.82%	\$ 44,760,559	8.11%	\$ 17,871	\$ 71,483.46
UTILITIES	9	0.32%	101	0.19%	\$ 2,025,182	0.37%	\$ 20,117	\$ 80,470.81
CONSTRUCTION	252	8.89%	2187	4.21%	\$ 29,605,509	5.36%	\$ 13,535	\$ 54,139.91
MANUFACTURING	88	3.11%	5934	11.42%	\$ 60,676,211	10.99%	\$ 10,225	\$ 40,900.72
WHOLESALE TRADE	139	4.90%	1317	2.53%	\$ 20,963,227	3.80%	\$ 15,921	\$ 63,685.75
RETAIL TRADE	319	11.26%	5749	11.06%	\$ 41,541,702	7.52%	\$ 7,225	\$ 28,901.33
TRANSPORTATION/WAREHOUSING	113	3.99%	1506	2.90%	\$ 21,254,239	3.85%	\$ 14,113	\$ 56,452.16
INFORMATION	36	1.27%	675	1.30%	\$ 7,411,211	1.34%	\$ 10,974	\$ 43,896.61
FINANCE/INSURANCE	182	6.42%	2177	4.19%	\$ 31,759,966	5.75%	\$ 14,587	\$ 58,346.54
REAL ESTATE/RENTAL/LEASING	144	5.08%	779	1.50%	\$ 7,998,147	1.45%	\$ 10,263	\$ 41,051.22
PROFESSIONAL/SCIENTIFIC/TECHNICAL SERVICES	248	8.75%	1064	2.05%	\$ 13,796,753	2.50%	\$ 12,971	\$ 51,883.75
MANAGEMENT OF COMPANIES/ENTERPRISES	22	0.78%	1262	2.43%	\$ 32,539,927	5.89%	\$ 25,784	\$ 103,137.65
ADMIN/SUPPORT/WASTE MNGMT/REMEDIATION SERVICES	159	5.61%	3316	6.38%	\$ 23,109,884	4.19%	\$ 6,969	\$ 27,876.82
EDUCATION SERVICES	42	1.48%	6602	12.70%	\$ 57,902,006	10.49%	\$ 8,770	\$ 35,079.72
HEALTHCARE AND SOCIAL ASSISTANCE	310	10.94%	6781	13.05%	\$ 84,836,642	15.37%	\$ 12,510	\$ 50,041.28
ARTS/RECREATION/ENTERTAINMENT COMPANIES	35	1.24%	456	0.88%	\$ 1,760,720	0.32%	\$ 3,864	\$ 15,456.21
ACCOMODATION/FOOD SERVICE	245	8.65%	4631	8.91%	\$ 19,475,135	3.53%	\$ 4,206	\$ 16,822.75
GENERAL AUTOMOTIVE REPAIR & OTHER PERSONAL SERVICES	351	12.39%	1609	3.09%	\$ 11,542,180	2.09%	\$ 7,175	\$ 28,699.99
PUBLIC ADMINISTRATION	21	0.74%	3009	5.79%	\$ 36,394,158	6.59%	\$ 12,094	\$ 48,375.10
TOTALS	2,834	100.00%	51,979	100.00%	\$ 552,056,824	100.00%	\$ 11,883	\$ 950,636

of 3.99% statewide and 3.37% in the Greeley MSA. At the same time, the unemployment number and rate declined at 15.63% and 3.85% statewide growth of 3.99% statewide and 3.37% in the Greeley MSA. At the same time, the unemployment number and rate declined at 15.63% and 3.85% respectively. Table 5-2 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.

Employment by Industry

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. Table 5-3 shows the relationship among the different industries within Greeley including the number of enterprises, number of employees and total payroll in industries in Greeley.

Figure 5-1 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.



Table 5-4 shows the changes in number of businesses, employees, and wages between the second quarters of 2016 and 2017. As can be seen from the table, Greeley's economy grew significantly in terms of all factors. The number of businesses increased by280 or 10.1% with the largest increase in number and percent being in general automotive repair and other personal services, a lower wage category. There were 1857 new jobs created, a 3.71% increase with most new jobs in the mining and oil and gas area one of the highest per capita wage paying categories followed by construction field, also a higher than average wage category. Overall, there was a 7.44% increase in per capita wages, significantly greater than inflation.

INDUSTRY	CHANGE IN NUMBER OF BUSINESSES	PERCENT CHANGE IN OF BUSINESSES	CHANGE IN NUMBER OF EMPLOYEES	PERCENT CHANGE OF EMPLOY- MENT	CHANGE IN TOTAL WAGES Q2 OF 2016	CHANGE IN Q2 AVG WAGE	CHAI ANNU AVG	NGE IN JALIZED WAGE	PERCENT CHANGE OF TOTAL WAGES
AGRICULTURAL/ FORESTRY/ FISHING/ HUNTING	3	8.33%	-51	-13.72%	\$ (225,867)	\$ 552	\$	2,209	-7.71%
MINING-NATURAL GAS/OIL, OIL/GAS OPERATIONS/DRILLING	8	11.11%	808	47.62%	\$ 17,455,142	\$ 1,777	\$	7,109	63.93%
UTILITIES	1	12.50%	4	4.14%	\$ (153,663)	\$ (2,423)	\$ ((9,688)	-7.05%
CONSTRUCTION	14	5.88%	234	11.96%	\$ 4,828,439	\$ 853	\$	3,411	19.49%
MANUFACTURING	1	1.15%	24	0.41%	\$ (858,929)	\$ (187)	\$	(750)	-1.40%
WHOLESALE TRADE	0	0.00%	1	0.05%	\$ (257,845)	\$ (204)	\$	(816)	-1.22%
RETAIL TRADE	5	1.59%	87	1.53%	\$ 1,975,258	\$ 238	\$	952	4.99%
TRANSPORTATION/WAREHOUSING	1	0.89%	204	15.67%	\$ 4,701,963	\$ 1,400	\$	5,600	28.41%
INFORMATION	2	5.88%	-8	-1.17%	\$ (219,345)	\$ (192)	\$	(770)	-2.87%
FINANCE/INSURANCE	-3	-1.62%	-104	-4.54%	\$ (7,196,306)	\$ (2,492)	\$	(9,968)	-18.47%
REAL ESTATE/RENTAL/LEASING	4	2.86%	95	13.94%	\$ 1,330,365	\$ 515	\$	2,058	19.95%
PROFESSIONAL/SCIENTIFIC/TECHNICAL SERVICES	5	2.06%	104	10.88%	\$ 1,539,809	\$ 194	\$	778	12.56%
MANAGEMENT OF COMPANIES/ENTERPRISES	6	37.50%	124	10.90%	\$ 6,640,826	\$ 3,026	\$ 1	12,104	25.64%
ADMIN/SUPPORT/WASTE MNGMT/REMEDIATION SERVICES	33	26.19%	-50	-1.49%	\$ 2,658,292	\$ 893	\$	3,573	13.00%
EDUCATION SERVICES	2	5.00%	-42	-0.64%	\$ 2,651,076	\$ 455	\$	1,819	4.80%
HEALTHCARE AND SOCIAL ASSISTANCE	46	17.42%	-23	-0.33%	\$ 1,068,569	\$ 199	\$	795	1.28%
ARTS/RECREATION/ENTERTAINMENT COMPANIES	4	12.90%	56	14.01%	\$ 388,825	\$ 431	\$	1,726	28.34%
ACCOMODATION/FOOD SERVICE	41	20.10%	164	3.68%	\$ 1,822,830	\$ 253	\$	1,014	10.33%
GENERAL AUTOMOTIVE REPAIR & OTHER PERSONAL SERVICES	82	30.48%	199	14.12%	\$ 954,903	\$ (335)	\$ ((1,342)	9.02%
PUBLIC ADMINISTRATION	5	31.25%	30	1.02%	\$ (862,146)	\$ (413)	\$ ((1,650)	-2.31%
TOTALS	260	10.10%	1,857	3.71%	\$ 38,242,196				
AVERAGE						\$ 594	\$	2.376	7.44%

Table 5-4 Q2 2016-2017 Changes in Employment and Wages by Industry

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 recovered to between \$50.00 and \$60.00 per barrel through much of 2016. It has since recovered to between \$60.00 and \$70.00 per barrel during early 2018. The number of oil and gas drilling rigs operation in Weld County closely follows the price of oil on the commodity markets. As technological innovation reduces the need for workers, per drilling rig employment is dropping significantly from the 100 to 125 which was typical in 2015. In fact, in Canadian Oil and gas fields the need for labor is reduced by



as much as 2/3 from 2015 figures. (<u>https://www.epmag.com/study-only-one-third-canadian-oil-patch-job-losses-expected-return-1679346#p=full</u> Accessed 1/22/18).

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 5-3 shows that U. S. adjusted household income increased along a bumpy line from 1965 through 2000 and then stagnated along another bump line through 2016. Although the most recent trends since 2012 show an increase, household income has not surpassed the year 2000.



Figure 5-4 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. Since then it has recovered to 99 % of its 2007 high, \$56,593 in 2016 (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 increased to a peak of \$71,144 in 2015 before dropping back to \$63,400 in 2016.

While the U.S., Colorado, and Greeley economies all expanded significantly during the 2016, adjusted household income (the best income indicator for the ability to afford housing) has not been keeping up. This is still above the U.S. median household income but back below the Colorado median income for the first time since 2013.



Jobs-Housing Balance

There were approximately 51, 979 jobs in Greeley during the second quarter of 2017. At the beginning of 2017, there were 38,888 housing units in Greeley for a jobs to housing ration of 1.34. That means that for every housing unit there were 1.34 jobs.

VI TRENDS THAT AFFECT RESIDENTIAL BUILDING IN GREELEY

There are several trends that can help explain why the new construction rates have fallen in Greeley since 2015 when compared to the rest of Northern Colorado, These include a high housing vacancy rate at the end of the Great Recession, difficult financing for land development since the Great Recession, the large number of foreclosures that occurred during the Great Recession, and the rapid increase in the cost of raw water rights at the end of the Great Recession.



Greeley had been particularly hardhit be the recession leading to a high foreclosure rate and high housing vacancy rates. A lack of available financing helped to hold residential building rates down through early 2013. As the financial picture improved, subdivisions that had been dormant were absorbed and built out from late 2013 through 2016. Because financing was available for the development of available multi-family sites,

multi-family units made up a higher than expected proportion of new housing until in 2017, where it made up 68% of the new housing starts in Greeley. It is important to note, however, that this same trend toward a greater percentage of multi-family housing is also is occurring in Fort Collins and Loveland, for example, even while the number of single-family housing units is also increasing there. Figure 6-1 shows the number of foreclosures from 2007 to 2017. Since the peak of over 3000 foreclosures in 2009, the number of foreclosures per year has declined by nearly 90% from 3354 to 354.



Figure 6-2 shows the Greeley housing vacancy rate from 2010 to 2017. The single-family rate has declined steadily since that time indicating a tightening of the housing market. The multi-family vacancy rate, on the other hand, has been quite volatile. It rises suddenly as new large projects come on-line and drops rapidly as the new units are absorbed. When it is examined on a quarterly basis,

it appears to be even more volatile. It is generally accepted by economists that a balanced market in multi-family is when the vacancy rate is approximately 5%.

Financing

One of the causes of the Great Recession was the relaxation of standards for mortgages and financing for land development projects. Once the recession occurred and foreclosures increased, banking standards tightened financing for land development projects. Without bank financing, land development projects became difficult to finance. With the loss of private finance, public finance became more important. Many of Colorado's municipalities increased the use metropolitan districts as a tool for financing land development projects. It appears, for example, that the use of metro-districts enabled Windsor and Severance to increase development and building activity. If there were to be an increase in the use of metropolitan-districts approved in Greeley, an increase in subdivision and building activity could be expected.

Raw Water

One of the major issues for growing communities is the availability of water rights needed to meet the demand for water for commercial, industrial, and residential users. As the right to use most available water in Colorado has been appropriated, the primary source of water for urban uses has been through the purchase of agricultural water rights. The most valuable rights in Northern Colorado are senior rights diverted from rivers close to the mountains and treatment plants or Colorado-Big Thompson water units. As more of this water is acquired for present and future urban expansion, the price escalates especially during recoveries after recession. With the recovery from the last recession, the price of raw water, especially Colorado Big Thompson water more than tripled in price from an average of approximately \$10,000 per acre foot from 2009 to 2012 to an average of approximately \$34,000 per acre foot since 2014. (See Figure 6-3).

For each acre of raw land developed for residential uses, Greeley requires three acre feet of raw water, which if it is Colorado Big Thompson water, costs \$ 102,000 per acre. At Greeley's average gross density of 3.43 units per acre, each single-family residence requires approximately 0.875 acre-feet of raw water, meaning



that this additional cost of raw water contributed approximately \$21,000 to the price of each home. This cost increases the household income necessary to qualify for a 30-year mortgage for a new home by approximately \$8,400.

The price charged for raw water within each jurisdiction varies with local policy. The raw water requirements in Greeley impose approximately the average cost burden in Northern Colorado. However, given the more modest incomes in Greeley and the lower ability to purchase housing, this average cost burden would depress the ability of many families to purchase housing.

With increased density, the per-unit water burden is reduced proportionally since approximately half of treated water is used for outdoor water use. Figure 6-4 shows how increasing density could reduce the cost of raw water per unit. Increasing density in residential developments is a key recommendation of *Imagine Greeley*, the update of the Greeley Comprehensive Plan.

Increased density reduces the need for raw water in two ways: first by increasing the number of housing units paying for raw water on each acre, and secondly, by covering more of each acre with roofs and pavement, thereby reducing the demand for irrigation.



The City is also exploring mechanisms to reduce the raw water demand per unit. One recently adopted incentive for water conservation is an innovative water budget approach in billing for water in Greeley.

K-12 Schools in Growth Areas

Figure 6-4 shows that Greeley is located within four school districts: Greeley Evans, Eaton, Milliken/ Johnstown, and Windsor. Most of the current growth is taking place within the Windsor School District with somewhat less taking place in the Greeley/Evans School District. Much of the residential development in the Greeley Evans School District took place before the



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1960s and shortly thereafter. As a result there has been a limited need for new school sites in recent years. In the Windsor School District, however, much of the residential development has been since 1990. Colorado Law permits local governments to require school site dedications for new K-12 schools and some municipalities collect fees in lieu of site dedication when there is not a feasible site within a development. Both Windsor and Severance have been implementing these policies and the Windsor School District has been building new schools in these jurisdictions in response. The Windsor School District is planning for its next school bond issue in the early 2020s and there are not any current plans to build schools in Greeley since there is no mechanism to provide school sites. This means that for the foreseeable future, Greeley students attending Windsor Schools will be bussed the either Windsor or Severance.

VII POTENTIAL SCENARIOS AND GROWTH PROJECTIONS

During the last 20 years Greeley's hosing growth rate has varied from as low as 0.12% in 2012 to as high as 4.67% in 2003. The five-year periods with the highest and lowest housing growth



rates also included these years. From 1999 through 2003, Greeley's housing stock grew at an average rate of 3.67%, the highest fiveyear average housing growth rate. From 2009 through 2013, the City's housing stock grew at an average rate of 0.19%, the lowest fiveyear average housing growth rate. It is unlikely that

Greeley's average annual hosing growth rate will fall outside these limits.

High Growth Rate		Medium Growth Rate	Low Growth	
2018	1440	769	47	
2019	1493	784	47	
2020	1548	799	47	
2021	1604	815	47	
2022	1663	831	47	
2023	1724	847	47	

Table 7-2: Total Units based on High Average, and Low Growth Rates

	High Growth Rate 3.67%	Medium Growth Rate 1.90%	Low Growth Rate 0.12%
2018	39237	39237	39237
2019	40677	40006	39284
2020	42170	40790	39331
2021	43717	41590	39378
2022	45322	42405	39426
2023	46985	43236	39473



Two trends that could affect the number of residential building permits in Greeley are how quickly metropolitan districts can be implemented and made ready for permits, and the potential for a recession likely to occur in late 2019 or early 2020 and likely to last approximately nine months based on projections from several economists.

			Forecast
		New Units	Total
	Forecast	Permitted	Housing
	Growth Rate	2018-2022	Units
2018	1.45%	569	39237
2019	2.53%	1020	40257
2020	1.04%	423	40681
2021	2.58%	1078	41759
2022	2.59%	1109	42867
2023	2.59%	1140	44007

Depending on how long it takes for the approval of new metropolitan districts and development construction, an increase in single-family building permits is anticipated either in the second half of 2018 or in early 2019. This increase is likely to mean that the number of new single-family units permitted in Greeley will be closer to proportionate to its population.

The residential building permit forecast assumes a continuation of the current low rate of building

permit activity until the second half of 2018 at which time newly developed lots will become permit-ready. For the next year or longer if the economy remains strong, residential permit activity should remain strong at over 1000 units per year. Assuming a shallow recession in late 2019 or 2020, the number of new permits will drop below 1000 and then recover in 2021 and 2022.



fits between the extremes of 0.19% and 3.97% per year and, in fact approximates the average rate of growth that Greeley has occurred historically in Greeley.





It is anticipated that the trend toward higher density multifamily housing that began during the most recent recovery will continue.

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able 7-4: Projected Split between ingle-family and Multi-Family Permits					
Total New Housing Permits		Single Family Permits	Multi-Family Permits		
2018	569	199	370		
2019	1020	408	612		
2020	423	191	233		
2021	1078	485	593		
2022	1109	443	665		
2023	1140	456	684		

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. Although a recession in 2019 or 2020 will slow residential building in Greeley, it is projected that Greeley's long-term growth rate

will revert to approximately 1.8 % for the foreseeable future. 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 putting Greeley more in



line with the residential growth trend in other Northern Colorado municipalities for the last five years.

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