

## Market Conditions/Time Trending Explanation

Jefferson County Assessor's Office: 2021 Reappraisal: July 1, 2018 – June 30, 2020

### Why Time Trending is done

Colorado statutes [39-1-104 (10.2) (a) C.R.S.] require all county assessors to analyze sales data to see what differences, if any, there are between the market conditions at the time of a comparable sale and the valuation date. Commonly referred to as time trending, sales must be adjusted to the end of the data collection period (July 1, 2018 through June 30, 2020). Time trending of sales is the usual practice in all types of appraisal work to account for the principle of supply and demand as well as the principle of change.

### How Time Trending is done

There are several methods used to determine the presence of a time trend. The one most frequently used within Colorado is called a Sales Ratio Trend Analysis. It is also the same method used by the auditing firm conducting the 2021 Property Assessment Study used to determine county compliance.

In general, this method uses the assessor's appraised actual values from the last reappraisal (June 30, 2018) and compares it against recent sales data that has occurred during the newer period of July 1, 2018 through June 30, 2020.

This comparison is done using a sales ratio, which is simply the relationship between appraised values and sales prices. For example, a house that had a June 2018 appraised value of \$350,000 and sold two years later, June 2020, for \$440,000, would have a ratio of 1.257 (\$440,000/\$350,000). What this one ratio indicates is that the property increased approximately 26% from June 2018 to June 2020. This type of ratio comparison is done to the thousands of sales that have occurred throughout the county. Ratios are graphed by month of sale, starting with the earliest date, July 2018, and ending June 2020.

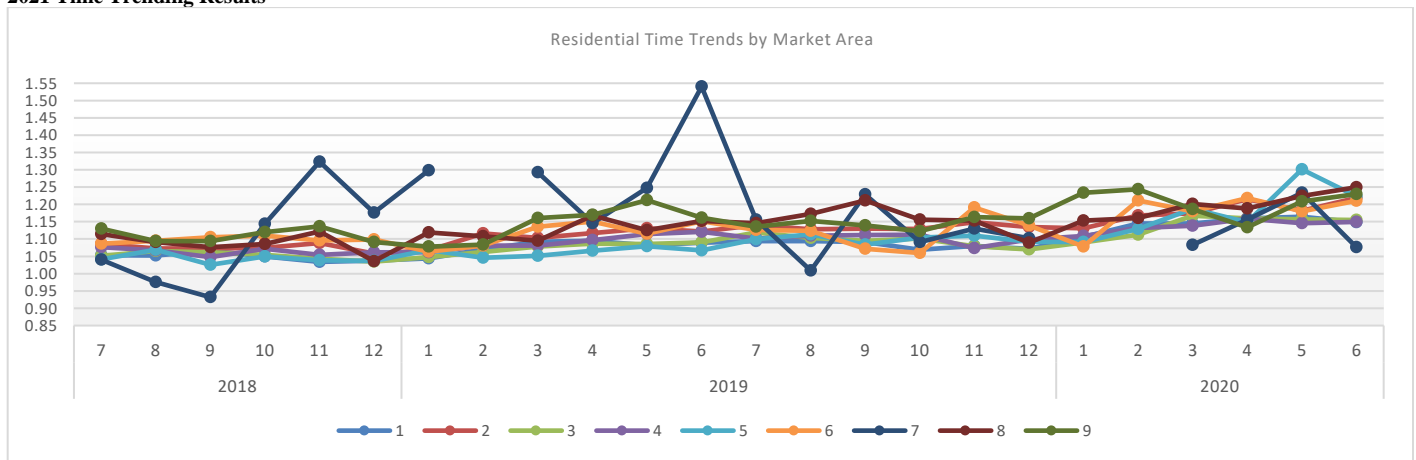
After graphing all ratios, a statistical procedure called "regression" is used. Regression is able to place a line of "best fit" between all the plotted ratios. In effect, it is the slope or angle of this line that is used to determine the presence of any significant inflationary or deflationary trends. An upward line indicates appreciation, downward line depreciation, and a level line no change.

### 2021 Time Trending Analysis

In the 2021 reappraisal, the Jefferson County Assessor's office used Sales Ratio and Multiple Regression analyses for the determination of market trends. Paired sales were not used due to the number of fix and flip scenarios which changed the inventory. A major component influencing value were remodels to homes. For those scenarios, the most current sale was typically used for analysis. The two-year time frame (2019 to 2021) showed a continued upward trend for all residential properties. The total number of qualified sales was 20,893, which is a slight decline from 2019. This was attributed to the slowdown in March 2020 due to the Covid-19 pandemic. Rather causing the market to decline, market demand continued in May and June without missing a beat. There was little evidence of foreclosure or lender-owned sales. New homes were removed from the time trend analysis so that only properties used in the prior reappraisal were considered for the ratio study. New home sales were included in the overall valuation analysis. Jeffco's vacant land availability is dwindling, which was reflected in the strong trend for vacant land sales and the increasing number of existing residential home demos. The analysis indicated different results by location; property subclasses had minimal differences, so time trend adjustments were by location. See the table below for specific adjustment time periods and amounts. Time trend total adjustments ranged from 9% to 25% and varied by market area.

The chart below shows the graphic representation of all residential sales in the 24-month time frame. The red line is the regression line and its "best fit" position. The blue line represents the median sales ratios for each month. July 2018 is Month 1; December 2018 is Month 6; June 2019 is Month 12; and June 2020 is Month 24.

### 2021 Time Trending Results



The following table summarizes the monthly percent adjustment rates that were applied to the sales and the number of sales used in the analysis.

Area	Single Family		Duplex/Triplex		Condo		Town Homes		Vacant Land	
	#Sales	%/Month:	#Sales	%/Month:	#Sales	%/Month:	#Sales	%/Month	#Sales	%/Month:
1	2,423	0.40	32	0.40	234	0.40	482	0.40	17	0.00
2	3,155	0.50	188	0.50	363	0.50	452	0.50	47	0.00
3	2,900	0.30	176	0.30	725	0.30	1,251	0.30	42	0.00
4	2,941	0.40	34	0.40	531	0.40	670	0.40	26	0.00
5	1,593	0.20	54	0.20	90	0.20	214	0.20	10	0.00
6	439	0.50	60	0.50	86	0.50	121	0.50	8	0.00
7	85	0.00	n/a		n/a		n/a		25	0.00
8	788	0.30	55	0.30	84	0.30	50	0.30	41	0.00
9	1,006	0.40	1	0.40	n/a		n/a	0.40	115	0.00

Jefferson County 2021 Reappraisal:  
Residential Property Median Value Change from 2019 to 2021

Values									
ImpType	Market Area	Sch Count	Median Current Value	Median Prior Value	Median Total Change	Imp sale cnt	Median Tadj Price		
☒Condo, Res: Attached		1	1,496	\$261,070	\$229,352	11%	238	\$262,280	
		2	2,354	\$247,745	\$207,879	19%	360	\$246,418	
		3	4,574	\$230,615	\$210,845	8%	706	\$237,817	
		4	2,960	\$278,882	\$253,129	12%	514	\$272,461	
		5	287	\$461,264	\$384,952	19%	92	\$340,888	
		6	812	\$226,771	\$194,849	15%	86	\$232,636	
		8	530	\$347,763	\$323,788	6%	101	\$369,910	
	<b>Condo, Res: Attached Total</b>		<b>13,013</b>	<b>\$255,723</b>	<b>\$229,063</b>	<b>12%</b>	<b>2,097</b>	<b>\$258,110</b>	
☒Duplex: Two Family		1	325	\$436,424	\$397,682	12%	33	\$389,122	
		2	1,908	\$476,181	\$422,721	11%	189	\$525,600	
		3	1,335	\$483,892	\$436,376	10%	163	\$534,000	
		4	342	\$548,783	\$480,805	14%	34	\$538,046	
		5	314	\$473,151	\$429,973	8%	52	\$465,994	
		6	437	\$545,040	\$476,709	11%	64	\$679,140	
		7	2	\$509,820	\$463,745	9%			
		8	373	\$472,842	\$400,439	18%	52	\$504,245	
		9	11	\$391,692	\$347,296	17%	1	\$304,241	
<b>Duplex: Two Family Total</b>		<b>5,047</b>	<b>\$481,682</b>	<b>\$429,564</b>	<b>11%</b>	<b>588</b>	<b>\$525,300</b>		
☒Single Family		1	24,004	\$425,272	\$392,013	8%	2,402	\$442,272	
		2	32,707	\$436,681	\$395,779	10%	3,115	\$466,247	
		3	30,144	\$441,576	\$399,642	11%	2,768	\$462,644	
		4	33,047	\$485,653	\$432,871	12%	2,891	\$491,579	
		5	9,866	\$596,138	\$558,403	6%	1,613	\$625,906	
		6	6,593	\$652,060	\$592,412	11%	415	\$700,960	
		7	1,244	\$500,681	\$462,712	8%	81	\$475,000	
		8	8,345	\$699,758	\$635,222	10%	740	\$744,750	
		9	10,031	\$541,358	\$478,472	12%	974	\$580,800	
<b>Single Family Total</b>		<b>155,981</b>	<b>\$468,800</b>	<b>\$423,732</b>	<b>11%</b>	<b>14,999</b>	<b>\$497,840</b>		
☒Townhomes		1	2,920	\$274,822	\$254,520	8%	484	\$296,707	
		2	2,966	\$290,625	\$265,464	5%	451	\$354,570	
		3	7,181	\$281,816	\$271,659	4%	1,229	\$317,734	
		4	4,481	\$326,733	\$305,979	4%	649	\$333,264	
		5	771	\$356,278	\$351,004	0%	217	\$398,223	
		6	925	\$336,514	\$379,524	7%	120	\$479,793	
		8	344	\$402,678	\$413,593	-2%	47	\$523,180	
	<b>Townhomes Total</b>		<b>19,588</b>	<b>\$294,744</b>	<b>\$281,783</b>	<b>4%</b>	<b>3,197</b>	<b>\$335,794</b>	
☒Triplex: Three Family		1	1	\$688,165	\$698,110	-1%			
		2	78	\$475,321	\$468,147	0%	8	\$687,990	
		3	17	\$483,184	\$484,443	-0%	2	\$557,114	
		4	3	\$668,386	\$644,992	4%			
		6	21	\$547,482	\$552,836	-3%	1	\$668,936	
		8	3	\$617,362	\$501,567	11%	1	\$676,779	
		9	2	\$484,536	\$492,348	-2%			
	<b>Triplex: Three Family Total</b>		<b>125</b>	<b>\$508,320</b>	<b>\$491,801</b>	<b>-0%</b>	<b>12</b>	<b>\$672,858</b>	
	<b>Grand Total</b>		<b>193,754</b>	<b>\$443,605</b>	<b>\$401,954</b>	<b>10%</b>	<b>20,893</b>	<b>\$454,557</b>	