2021
LARIMER COUNTY PROPERTY ASSESSMENT STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

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APPRAISAL, INCORPORATED
Audit Division

September 15, 2021

Ms. Natalie Mullis
Director of Research
Colorado Legislative Council
Room 029, State Capitol Building
Denver, Colorado 80203

RE: Final Report for the 2021 Colorado Property Assessment Study

Dear Ms. Mullis:

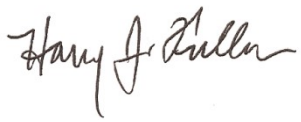
Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2021 Colorado Property Assessment Study.

These reports are the result of two analyses: A procedural audit and a statistical audit.

The procedural audit examines all classes of property. It specifically looks at how the assessor develops economic areas, confirms and qualifies sales, develops time adjustments and performs periodic physical property inspections. The audit reviews the procedures for determining subdivision absorption and subdivision discounting. Valuation methodology is examined for residential properties and commercial properties. Procedures are reviewed for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests, and non-producing patented mining claims.

Statistical audits are performed on vacant land, residential properties, commercial/industrial properties and agricultural land. A statistical analysis is performed for personal property compliance on the eleven largest counties: Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo and Weld. The remaining counties receive a personal property procedural study.

Wildrose Appraisal Inc. – Audit Division appreciates the opportunity to be of service to the State of Colorado. Please contact us with any questions or concerns.



Harry J. Fuller
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INTRODUCTION

Colorado

The State Board of Equalization (SBOE) reviews assessments for conformance to the Constitution. The SBOE will order revaluations for counties whose valuations do not reflect the proper valuation period level of value.

The statutory basis for the audit is found in C.R.S. 39-1-104 (16)(a)(b) and (c).

The legislative council sets forth two criteria that are the focus of the audit group:

To determine whether each county assessor is applying correctly the constitutional and statutory provisions, compliance requirements of the State Board of Equalization, and the manuals published by the State Property Tax Administrator to arrive at the actual value of each class of property.

To determine if each assessor is applying correctly the provisions of law to the actual values when arriving at valuations for assessment of all locally valued properties subject to the property tax.

The property assessment audit conducts a two-part analysis: A procedural analysis and a statistical analysis.

The procedural analysis includes all classes of property and specifically looks at how the assessor develops economic areas, confirms and qualifies sales, and develops time adjustments. The audit also examines the procedures for adequately discovering, classifying and valuing agricultural outbuildings, discovering subdivision build-out and subdivision discounting procedures. Valuation methodology for vacant land, improved residential properties and commercial properties is examined. Procedures for producing mines, oil and gas leaseholds and lands producing, producing coal mines, producing earth and stone products, severed mineral interests and non-producing patented mining claims are also reviewed.

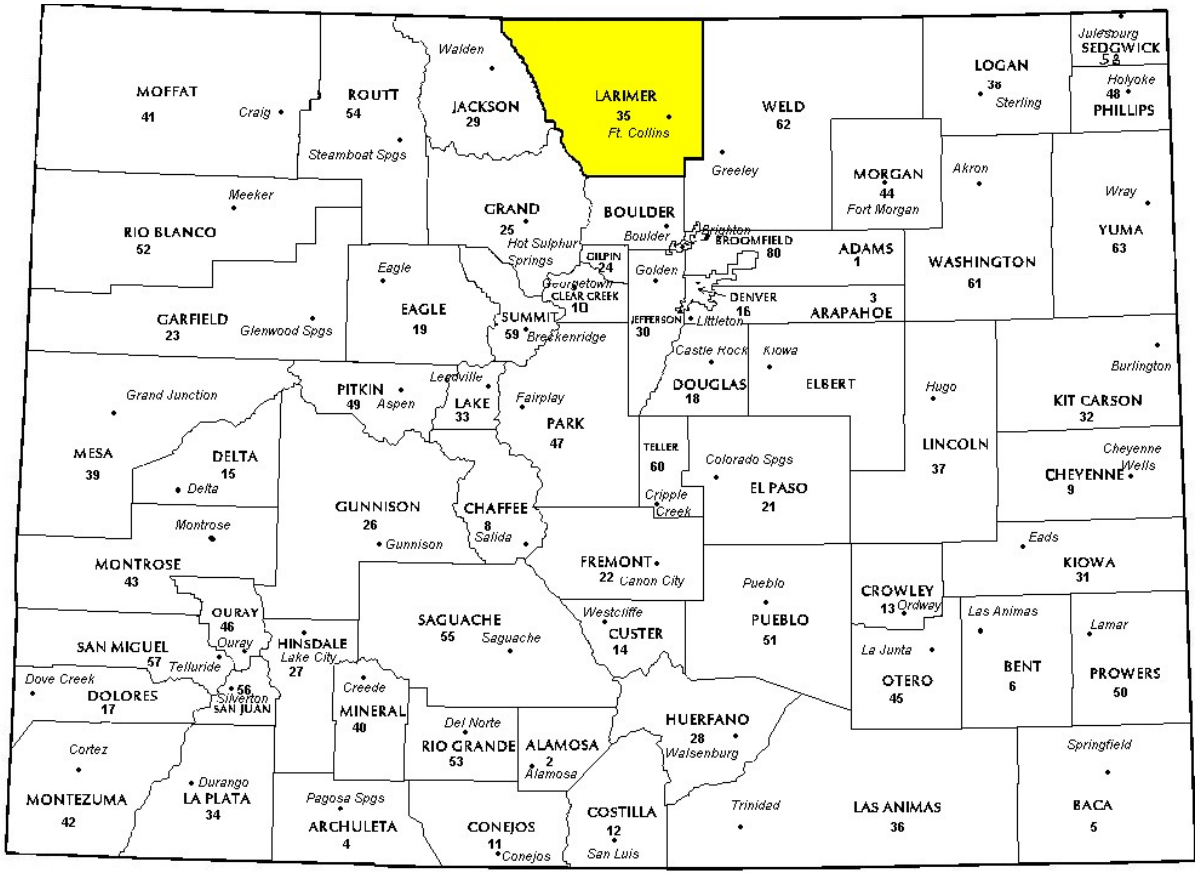
Statistical analysis is performed on vacant land, residential properties, commercial industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax Administrator.

Wildrose Audit has completed the Property Assessment Study for 2021 and is pleased to report its findings for Larimer County in the following report.

REGIONAL/HISTORICAL SKETCH OF LARIMER COUNTY

Regional Information

Larimer County is located in the Front Range region of Colorado. The Colorado Front Range is a colloquial geographic term for the populated areas of the State that are just east of the foothills of the Front Range. It includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Pueblo, and Weld counties.



Historical Information

Larimer County has approximately 2,596.0 square miles and an estimated population of approximately 356,899 people with 115.4 people per square mile, according to the U.S. Census Bureau's 2020 estimated census data. This represents a 19.1 percent change from April 1, 2010 to July 1, 2019.

Larimer County was created in 1861 as one of the seventeen original counties in the Colorado Territory; however, its western boundary was disputed. Controversy existed as to whether Larimer County ended at the Medicine Bow Range or at the Continental Divide thirty miles further west. An 1886 Colorado Supreme Court decision set the boundary at the Continental Divide, although the land between the Medicine Bow Range and the divide was made part of Jackson County in 1909.

Unlike that of much of Colorado, which was founded on the mining of gold and silver, the settlement of Larimer County was based almost entirely on agriculture, an industry that few thought possible in the region during the initial days of the Colorado Gold Rush. The mining boom almost entirely passed the county by. It would take the introduction of irrigation to the region in the 1860s to bring the first widespread settlement to the area.

In 1862, the United States Army established an outpost near Laporte that was designated as Camp Collins. A devastating flood in June 1864 wiped out the outpost, forcing the Army to seek a better location. At the urging of Joseph Mason, who had settled along the Poudre in 1860, the Army relocated its post downstream adjacent to Mason's land along the Overland stage route. The site of the new post became the nucleus of the town of Fort Collins, incorporated in 1873 after the withdrawal of the Army. By that time, Mason and others had convinced the legislature of the Colorado Territorial Legislature to designate the new town as the county seat. In 1870, the legislature designated Fort Collins as the location of the state agricultural college (later Colorado State University).

Cities and towns located in Larimer County, Colorado include Berthoud, Estes Park, Fort Collins, Loveland, Timnath, Wellington, Windsor, Bellvue, Buckeye, Campion, Cherokee Park, Drake, Glendevey, Glen Haven, LaPorte, Livermore, Kinikinik, Manhattan, Masonville, Pinewood Springs, Pingree Park, Poudre Park, Feather Lakes, Rustic, Teds Place, Virginia Dale and Waverly. *(Wikipedia.org)*

RATIO ANALYSIS

Methodology

All significant classes of property were analyzed. Sales were collected for each property class over the eighteen month period from January 1, 2019 through June 30th, 2020. Property classes with less than thirty sales had the sales period extended in six month increments up to an additional forty-two months. If this extended sales period did not produce the minimum thirty qualified sales, the Audit performed supplemental appraisals to reach the minimum.

Although it was required that we examine the median and coefficient of dispersion for all counties, we also calculated the weighted mean and price-related differential for each class of property. Counties were not passed or failed by these latter measures, but were counseled if there were anomalies noted during our analysis. Qualified sales were based on the qualification code used by each county, which were typically coded as either "Q" or "C." The ratio analysis included all sales. The data was trimmed for counties with obvious outliers using IAAO standards for data analysis. In every case, we examined the loss in data from trimming to ensure that only true outliers were excluded. Any county with a significant portion of sales excluded by this trimming method was examined further. No county was allowed to pass the audit if more than 5% of the sales were "lost" because of trimming.

All sixty-four counties were examined for compliance on the economic area level. Where there were sufficient sales data, the neighborhood and subdivision levels were tested for compliance. Although counties are determined to be in or out of compliance at the class level, non-compliant economic areas, neighborhoods and subdivisions (where applicable) were discussed with the Assessor.

Data on the individual economic areas, neighborhoods and subdivisions are found in the STATISTICAL APPENDIX.

Conclusions

For this final analysis report, the minimum acceptable statistical standards allowed by the State Board of Equalization are:

ALLOWABLE STANDARDS RATIO GRID		
Property Class	**Unweighted Median Ratio**	**Coefficient of Dispersion**
Commercial/Industrial	Between .95-1.05	Less than 20.99
Residential Condominium	Between .95-1.05	Less than 15.99
Residential	Between .95-1.05	Less than 15.99
Vacant Land	Between .95-1.05	Less than 20.99

The results for Larimer County are:

Larimer County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	250	0.978	1.019	8.7	Compliant
Residential	13,947	0.979	1.011	6.7	Compliant
Vacant Land	555	0.990	1.042	14.6	Compliant

After applying the above described methodologies, it is concluded from the sales ratios that Larimer County is in compliance with SBOE, DPT, and Colorado State Statute valuation guidelines.

Recommendations

None

TIME TRENDING VERIFICATION

Methodology

While we recommend that counties use the inverted ratio regression analysis method to account for market (time) trending, some counties have used other IAAO-approved methods, such as the weighted monthly median approach. We are not auditing the methods used, but rather the results of the methods used. Given this range of methodologies used to account for market trending, we concluded that the best validation method was to examine the sale ratios for each class across the appropriate sale period. To be specific, if a county has considered and adjusted correctly for market trending, then the sale ratios should remain stable (i.e. flat) across the sale period. If a residual market trend is detected, then the county may or may not have addressed market trending adequately, and a further examination is warranted. This validation method also considers the number of sales and the length of the sale period. Counties with few sales across the sale period were carefully examined to determine if the statistical results were valid.

Conclusions

After verification and analysis, it has been determined that Larimer County has complied with the statutory requirements to analyze the effects of time on value in their county. Larimer County has also satisfactorily applied the results of their time trending analysis to arrive at the time adjusted sales price (TASP).

Recommendations

None

SOLD/UNSOLD ANALYSIS

Methodology

Larimer County was tested for the equal treatment of sold and unsold properties to ensure that "sales chasing" has not occurred. The auditors employed a multi-step process to determine if sold and unsold properties were valued in a consistent manner.

We test the hypothesis that the assessor has valued unsold properties consistent with what is observed with the sold properties based on several units of comparison and tests. The units of comparison include the actual value per square foot and the change in value from the previous base year period to the current base year. The first test compares the actual value per square foot between sold and unsold properties by class. The median and mean value per square foot is compared and tested for any significant difference. This is tested using non-parametric methods, such as the Mann-Whitney test for differences in the distributions or medians between sold and unsold groups. It is also examined graphically and from an appraisal perspective. Data can be stratified based on location and subclass. The second test compares the difference in the median change in value from the previous base year to the current base year between sold and unsold properties by class. The same combination of non-parametric and appraisal testing is used as with the first test. A third test employing a valuation model testing a sold/unsold binary variable while controlling for property attributes such as location, size, age and other attributes. The model determines if the sold/unsold variable is statistically and empirically significant. If all three tests indicate a significant difference between sold and unsold properties for a given class, the Auditor may meet with the county to determine if sale chasing is actually occurring, or if there are other explanations for the observed difference.

If the unsold properties have a higher median value per square foot than the sold properties, or if the median change in value is greater for the unsold properties than the sold properties, the analysis is stopped and the county is concluded to be in compliance with sold and unsold guidelines. All sold and unsold properties in a given class are first tested, although properties with extreme unit values or percent changes can be trimmed to stabilize the analysis. The median is the primary comparison metric, although the mean can also be used as a comparison metric if the distribution supports that type of measure of central tendency.

The first test (unit value method) is applied to both residential and commercial/industrial sold and unsold properties. The second test is applied to sold and unsold vacant land properties. The second test (change in value method) is also applied to residential or commercial sold and unsold properties if the first test results in a significant difference observed and/or tested between sold and unsold properties. The third test (valuation modeling) is used in instances where the results from the first two tests indicate a significant difference between sold and unsold properties. It can also be used when the number of sold and unsold properties is so large that the non-parametric testing is indicating a false rejection of the hypothesis that there is no difference between the sold and unsold property values.

These tests were supported by both tabular and graphics presentations, along with written documentation explaining the methodology used.

Sold/Unsold Results	
Property Class	**Results**
Commercial/Industrial	Compliant
Residential	Compliant
Vacant Land	Compliant

Conclusions

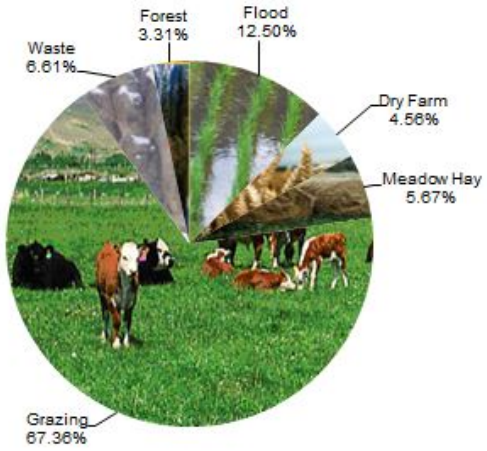
After applying the above described methodologies, it is concluded that Larimer County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

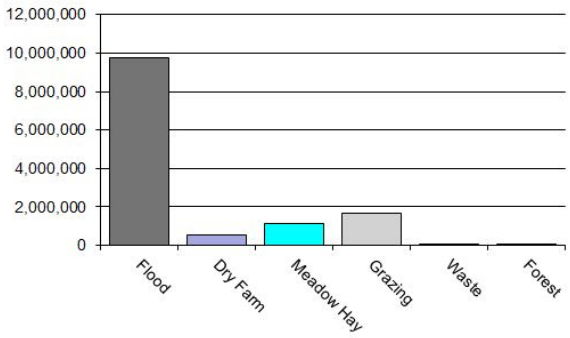
None

AGRICULTURAL LAND STUDY

Acres By Subclass



Value By Subclass



Agricultural Land

County records were reviewed to determine major land categories such as irrigated farm, dry farm, meadow hay, grazing and other lands. In addition, county records were reviewed in order to determine if: Aerial photographs are available and are being used; soil conservation guidelines have been used to classify lands based on productivity; crop rotations have been documented; typical commodities and yields have been determined; orchard lands have been properly classified and valued; expenses reflect a ten year average and are typical landlord expenses; grazing lands have been properly classified and valued; the number of acres in each class and subclass have been determined; the capitalization rate was properly applied. Also, documentation was required for the valuation methods used and any locally developed yields, carrying capacities, and expenses. Records were also checked to ensure that the commodity prices and expenses, furnished by the Property Tax Administrator (PTA), were applied properly. (See Assessor Reference Library Volume 3 Chapter 5.)

Conclusions

An analysis of the agricultural land data indicates an acceptable appraisal of this property type. Directives, commodity prices and expenses provided by the PTA were properly applied. County yields compared favorably to those published by Colorado Agricultural Statistics. Expenses used by the county were allowable expenses and were in an acceptable range. Grazing lands carrying capacities were in an acceptable range. The data analyzed resulted in the following ratios:

Larimer County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4117	Flood	48,484	200.87	9,739,086	10,192,892	0.96
4127	Dry Farm	17,683	30.65	541,992	549,092	0.99
4137	Meadow Hay	21,983	52.02	1,143,631	1,143,631	1.00
4147	Grazing	261,313	6.34	1,657,232	1,657,232	1.00
4177	Forest	12,853	6.72	86,439	86,526	1.00
4167	Waste	25,640	2.42	62,001	62,001	1.00
Total/Avg		**387,956**	**34.10**	**13,230,381**	**13,691,373**	**0.97**

Recommendations

None

Agricultural Outbuildings

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.74 through 5.77 were being followed.

Conclusions

Larimer County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

Agricultural Land Under Improvements

Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.19 and 5.20 were being followed.

Conclusions

Larimer County has used the following methods to discover land under a residential improvement on a farm or ranch that is determined to be not integral under 39-1-102, C.R.S.:

- Questionnaires
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Written Correspondence other than Questionnaire

Larimer County has used the following methods to discover the land area under a residential improvement that is determined to be not integral under 39-1-102, C.R.S.:

- Questionnaires
- Aerial Photography/Pictometry

Larimer County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of land under residential improvements that may or may not be integral to an agricultural operation.

Recommendations

None

SALES VERIFICATION

According to Colorado Revised Statutes:

A representative body of sales is required when considering the market approach to appraisal.

(8) In any case in which sales prices of comparable properties within any class or subclass are utilized when considering the market approach to appraisal in the determination of actual value of any taxable property, the following limitations and conditions shall apply:

(a)(I) Use of the market approach shall require a representative body of sales, including sales by a lender or government, sufficient to set a pattern, and appraisals shall reflect due consideration of the degree of comparability of sales, including the extent of similarities and dissimilarities among properties that are compared for assessment purposes. In order to obtain a reasonable sample and to reduce sudden price changes or fluctuations, all sales shall be included in the sample that reasonably reflect a true or typical sales price during the period specified in section 39-1-104 (10.2). Sales of personal property exempt pursuant to the provisions of sections 39-3-102, 39-3-103, and 39-3-119 to 39-3-122 shall not be included in any such sample.

(b) Each such sale included in the sample shall be coded to indicate a typical, negotiated sale, as screened and verified by the assessor. (39-1-103, C.R.S.)

The assessor is required to use sales of real property only in the valuation process.

(8)(f) Such true and typical sales shall include only those sales which have been determined on an individual basis to reflect the selling price of the real property only or which have been adjusted on an individual basis to reflect the selling price of the real property only. (39-1-103, C.R.S.)

Part of the Property Assessment Study is the sales verification analysis. WRA has used the above-cited statutes as a guide in our study of the county's procedures and practices for verifying sales.

WRA reviewed the sales verification procedures in 2021 for Larimer County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 60 sales listed as unqualified.

All of the sales in the unqualified sales sample had reasons that were clear and supportable.

For residential, commercial, and vacant land sales with considerations over $100,000, the contractor has examined and reported the ratio of qualified sales to total sales by class and performed the following analyses of unqualified sales:

The contractor has examined the manner in which sales have been classified as qualified or unqualified, including a listing of each step in the sales verification process, any adjustment procedures, and the county official responsible for making the final decision on qualification.

When less than 50 percent of sales are qualified in any of the three property classes (residential, commercial, and vacant land), the contractor analyzed the reasons for disqualifying sales in any subclass that constitutes at least 20 percent of the class, either by number of properties or by value, from the prior year. The contractor has

reviewed with the assessor any analysis indicating that sales data are inadequate, fail to reflect typical properties, or have been disqualified for insufficient cause. In addition, the contractor has reviewed the disqualified sales by assigned code. If there appears to be any inconsistency in the coding, the contractor has conducted further analysis to determine if the sales included in that code have been assigned appropriately.

If 50 percent or more of the sales are qualified, the contractor has reviewed a statistically significant sample of unqualified sales, excluding sales that were disqualified for obvious reasons.

Larimer County did not qualify for in-depth subclass analysis.

Conclusions

Larimer County appears to be doing an adequate job of verifying their sales. WRA agreed with the county's reason for disqualifying each of the sales selected in the sample. There are no recommendations or suggestions.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

Larimer County has submitted a written narrative describing the economic areas that make up the county's market areas. Larimer County has also submitted a map illustrating these areas. Each of these narratives have been read and analyzed for logic and appraisal sensibility. The maps were also compared to the narrative for consistency between the written description and the map.

Conclusions

After review and analysis, it has been determined that Larimer County has adequately identified homogeneous economic areas comprised of smaller neighborhoods. Each economic area defined is equally subject to a set of economic forces that impact the value of the properties within that geographic area and this has been adequately addressed. Each economic area defined adequately delineates an area that will give "similar values for similar properties in similar areas."

Recommendations

None

NATURAL RESOURCES

Earth and Stone Products

Methodology

Under the guidelines of the Assessor's Reference Library (ARL), Volume 3, Natural Resource Valuation Procedures, the income approach was applied to determine value for production of earth and stone products. The number of tons was multiplied by an economic royalty rate determined by the Division of Property Taxation to determine income. The income was multiplied by a recommended Hoskold factor to determine the actual value. The Hoskold factor is determined by the life of the reserves or the lease. Value is based on two variables: life and tonnage. The operator determines these since there is no other means to obtain production data through any state or private agency.

Conclusions

The County has applied the correct formulas and state guidelines to earth and stone production.

Recommendations

None

Producing Oil and Gas

Methodology

Assessors Reference Library (ARL) Volume 3, Chapter 6: Valuation of Natural Resources

STATUTORY REFERENCES

Section § 39-1-103, C.R.S., specifies that producing oil or gas leaseholds and lands are valued according to article 7 of title 39, C.R.S.

Actual value determined - when.

(2) The valuation for assessment of leaseholds and lands producing oil or gas shall be determined as provided in article 7 of this title.

§ 39-1-103, C.R.S.

Article 7 covers the listing, valuation, and assessment of producing oil and gas leaseholds and lands.

Valuation:

Valuation for assessment.

(1) Except as provided in subsection (2) of this section, on the basis of the information contained in such statement, the assessor shall value such oil and gas leaseholds and lands for assessment, as real property, at an amount equal to eighty-seven and one-half percent of:

(a) The selling price of the oil or gas sold there from during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year;

(b) The selling price of oil or gas sold in the same field area for oil or gas transported from the premises which is not sold during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year.

§ 39-7-102, C.R.S.

Conclusions

The county applied approved appraisal procedures in the valuation of oil and gas.

Recommendations

None

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2021 in Larimer County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold using the present worth method. The market approach was applied where 80 percent or more of the subdivision sites were sold. An absorption period was estimated for each subdivision that was discounted. An appropriate discount rate was developed using the summation method. Subdivision land with structures was appraised at full market value.

Conclusions

Larimer County has implemented proper procedures to adequately estimate absorption periods, discount rates, and lot values for qualifying subdivisions.

Recommendations

None

POSSESSORY INTEREST PROPERTIES

Possessory Interest

Possessory interest property discovery and valuation is described in the Assessor's Reference Library (ARL) Volume 3 section 7 in accordance with the requirements of Chapter 39-1-103 (17)(a) (II) C.R.S. Possessory Interest is defined by the Property Tax Administrator's Publication ARL Volume 3, Chapter 7: A private property interest in government-owned property or the right to the occupancy and use of any benefit in government-owned property that has been granted under lease, permit, license, concession, contract, or other agreement.

Larimer County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural and commercial possessory interest properties. The county has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

Conclusions

Larimer County has implemented a discovery process to place possessory interest properties on the roll. They have also correctly and consistently applied the correct procedures and valuation methods in the valuation of possessory interest properties.

Recommendations

None

PERSONAL PROPERTY AUDIT

Larimer County was studied for its procedural compliance with the personal property assessment outlined in the Assessor's Reference Library (ARL) Volume 5, and in the State Board of Equalization (SBOE) requirements for the assessment of personal property. The SBOE requires that counties use ARL Volume 5, including current discovery, classification, documentation procedures, current economic lives table, cost factor tables, depreciation table, and level of value adjustment factor table.

The personal property audit standards narrative must be in place and current. A listing of businesses that have been audited by the assessor within the twelve-month period reflected in the plan is given to the auditor. The audited businesses must be in conformity with those described in the plan.

Aggregate ratio will be determined solely from the personal property accounts that have been physically inspected. The minimum assessment sample is one percent or ten schedules, whichever is greater, and the maximum assessment audit sample is 100 schedules.

For the counties having over 100,000 population, WRA selected a sample of all personal property schedules to determine whether the assessor is correctly applying the provisions of law and manuals of the Property Tax Administrator in arriving at the assessment levels of such property. This sample was selected from the personal property schedules audited by the assessor. In no event was the sample selected by the contractor less than 30 schedules. The counties to be included in this study are Adams, Arapahoe, Boulder, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo, and Weld. All other counties received a procedural study.

Larimer County is compliant with the guidelines set forth in ARL Volume 5 regarding discovery procedures, using the following methods to discover personal property accounts in the county:

- Public Record Documents
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth

The county uses the Division of Property Taxation (DPT) recommended classification and documentation procedures. The DPT's recommended cost factor tables, depreciation tables and level of value adjustment factor tables are also used.

Larimer County submitted their personal property written audit plan and was current for the 2021 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts close to the $7,900 actual value exemption status
- Accounts protested with substantial disagreement

Larimer County's median ratio is 1.00. This is in compliance with the State Board of Equalization (SBOE) compliance requirements which range from .90 to 1.10 with no COD requirements.

Conclusions

Larimer County has employed adequate discovery, classification, documentation, valuation, and auditing procedures for their personal property assessment and is in statistical compliance with SBOE requirements.

Recommendations

None

WILDROSE AUDITOR STAFF

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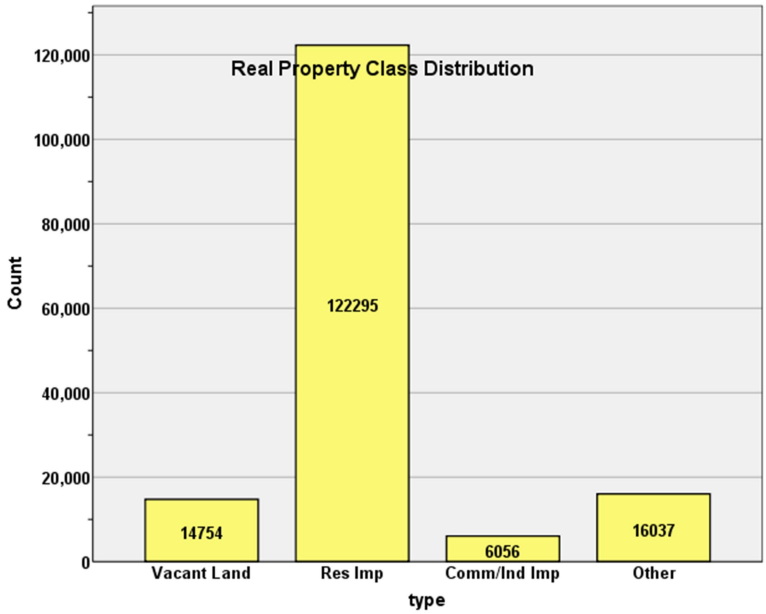
STATISTICAL APPENDIX

STATISTICAL COMPLIANCE REPORT
FOR LARIMER COUNTY
2021

I. OVERVIEW

Larimer County is a northern county located along Colorado's Front Range urban corridor. The county has a total of 159,142 real property parcels, according to data submitted by the county assessor's office in 2021. The following provides a breakdown of property classes for this county:



The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 75.0% of all vacant land parcels.

For residential improved properties, single family properties accounted for 87.6% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.8% of all such properties in this county.

II. DATA FILES

The following sales analyses were based on the requirements of the 2021 Colorado Property Assessment Study. Information was provided by the Larimer Assessor's Office in April 2021. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 13,947 qualified residential sales for the 24-month period ending June 30, 2020. The sales ratio analysis results were as follows:

Median	**0.979**
Price Related Differential	**1.011**
Coefficient of Dispersion	**6.7**

We next stratified the sale ratio analysis by economic area and neighborhood. The minimum count for the neighborhood stratification is 30 sales. The following are the results of this stratification analysis:

Economic Area

Case Processing Summary

		Count	Percent
ECONAREA	1.00	7498	53.8%
	2.00	5346	38.3%
	3.00	608	4.4%
	4.00	495	3.5%
Overall		13947	100.0%
Excluded		0	
Total		13947	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1.00	.978	1.011	.064
2.00	.979	1.010	.062
3.00	.977	1.007	.087
4.00	.977	1.027	.133
Overall	.979	1.011	.067

B. Neighborhoods with 30 or more sales

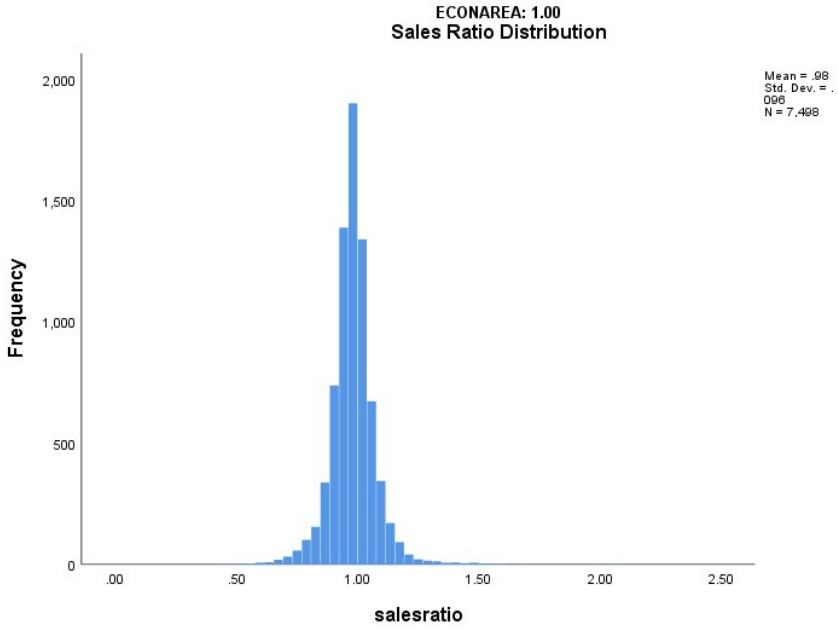
Ratio Statistics for CURRTOT / TASP

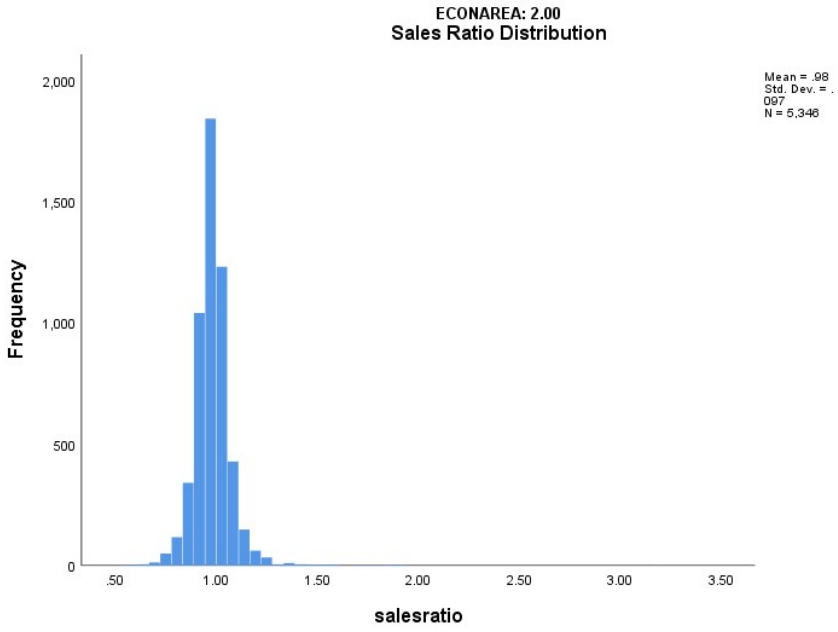
Group	Median	Price Related Differential	Coefficient of Dispersion
18729 0679	.997	.998	.062
18729 0896	.937	1.004	.064
18729 0898	.990	1.014	.073
18729 1733	.990	1.020	.075
18729 1997	.972	1.005	.092
18729 19976	.955	1.000	.052
18729 8014	.975	1.003	.052
18729 8017	.982	1.006	.037
18729 8040	.995	1.001	.042
18729 8050	.971	1.002	.039
18933 0398	.930	1.002	.051
18933 1942	.966	1.001	.032
18933 1971	.960	1.000	.036
18933 240768	.998	1.003	.056
18933 5006	.992	1.007	.086

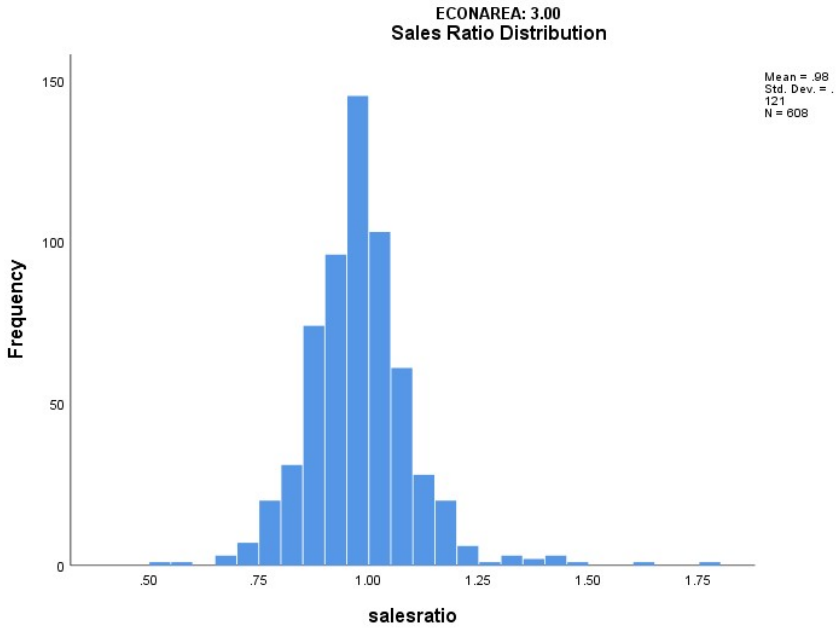
18933 5007	1.005	1.004	.044
18933 5008	.970	1.005	.054
18933 5008001005	1.038	1.002	.046
18933 5010	.983	1.001	.042
18933 5017	1.001	1.002	.051
18933 80942	.959	1.000	.075
18933 8098	.970	1.000	.046
18933 8132	.981	1.000	.041
18933 8255	.992	1.004	.041
18933 8330	.982	1.001	.035
18934 6032	.986	1.001	.031
18934 6043	.981	1.000	.046
18934 6045	.972	1.000	.033
18934 6046	.977	1.001	.027
18934 6048	.971	1.001	.040
18934 6051	1.009	1.002	.030
18934 6053	.978	.999	.035
18934 6055	.962	1.005	.052
18934 6067	.953	1.005	.050
19601 1344	.968	1.001	.037
19613 1566	1.006	1.000	.040
19613 1838	.980	1.000	.049
19613 18383	.983	1.002	.043
19613 1956	.998	1.008	.046
19613 8045	1.001	1.002	.040
19614 18513	.979	1.000	.037
19711 1109	.973	1.047	.146
19711 1202	.997	1.019	.098
19722 1227	.970	.999	.053
19734 1333	.962	.999	.041
19836 8116	.998	1.007	.055
28506 230568	.942	1.002	.050
28506 2436	1.005	1.007	.059
28506 2694	1.003	1.008	.060
28506 2723	.991	1.005	.043
28506 2725	.969	1.005	.055
28506 2736	.982	1.003	.039
28506 2753	.987	1.009	.058
28506 5802	.957	.999	.038
28506 5802001001	1.009	.999	.057
28506 5813	1.006	1.024	.078
28623 0455	.967	1.006	.083
28623 55034	1.001	1.004	.047
28623 5510	.951	1.017	.075
28623 5513	.981	1.007	.061
28623 5514	.984	1.020	.080
28623 5522	.992	1.006	.045
29414 4065	.953	1.000	.042
29414 4093	1.023	1.003	.050
29414 4104	.949	1.046	.140
29414 4114	.979	1.002	.050
29414 4118	.970	1.008	.051
29414 4125	.947	1.001	.037
29502 2340	.947	1.004	.047
29502 2407	.982	1.009	.069
29502 2558	.960	1.005	.062
29502 2624	.977	1.002	.036

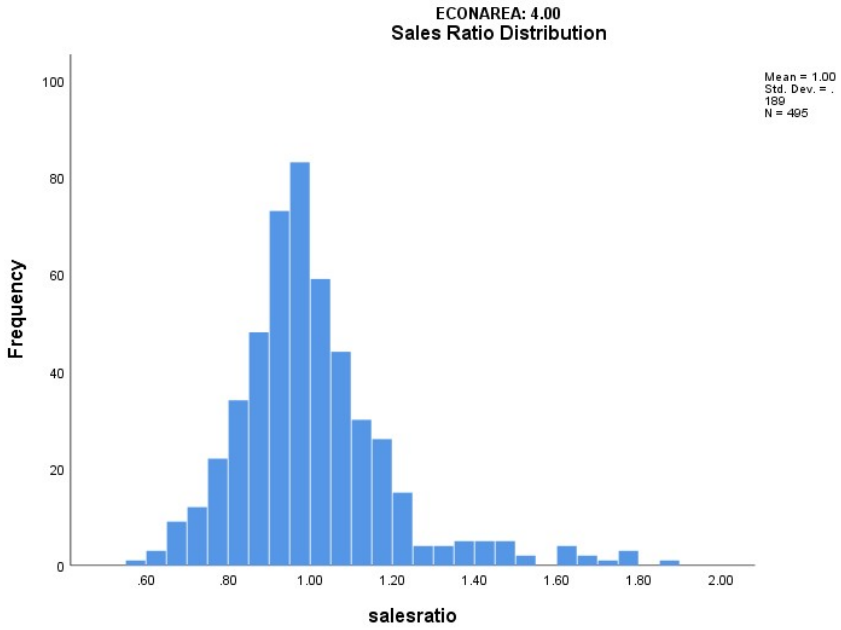
29517 2631	.988	1.010	.059
29517 2853	.992	1.002	.037
29522 2130	1.018	1.007	.055
29522 2744009000	.981	1.000	.036
29522 2803	.969	1.003	.049
29635 2691	.997	1.001	.034
29635 2733	.975	1.005	.048
29635 27331	.988	1.002	.047
29635 2748	.988	1.002	.049
29635 2849	.980	1.001	.040
29635 8510	.995	1.007	.051
33525 0223	.989	1.004	.086
33525 3195	.982	1.032	.092
41428 0151	1.001	1.001	.115
42915 0327	1.003	1.020	.106
43028 0272	.986	1.032	.126
Overall	.979	1.007	.058

The above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. None of the neighborhoods with at least 30 sales were outside of the standards for either the median sales ratio or the COD after rounding to two places. The following graphs describe further the sales ratio distribution for these properties:




ECONAREA: 2.00
Sales Ratio Distribution
Mean = .98
Std. Dev. = .097
N = 5,346
Frequency
2,000
1,500
1,000
500
0
.50
1.00
1.50
2.00
2.50
3.00
3.50
salesratio


ECONAREA: 3.00
Sales Ratio Distribution
Mean = .98
Std. Dev. = .121
N = 608
Frequency
150
100
50
0
.50
.75
1.00
1.25
1.50
1.75
salesratio

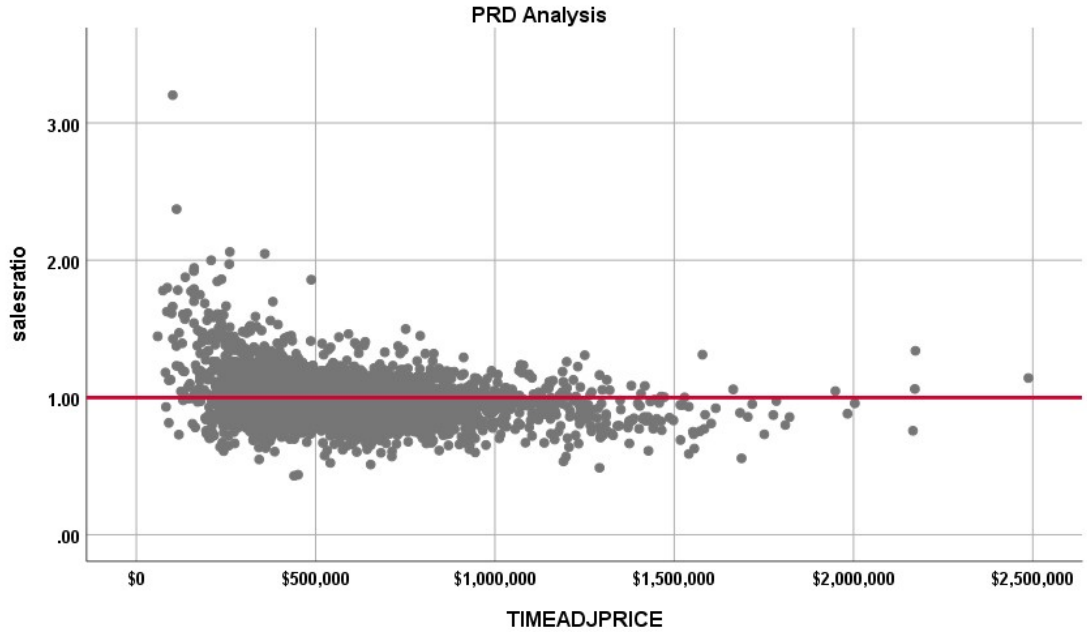


The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

Subclass 1212 PRD Analysis

We next analyzed residential properties identified as 1212 using the state abstract code system. These include single family residences, town homes and purged manufactured homes. The following indicates the distribution of sales ratios across the sale price spectrum:

1212 SALES



The Price-Related Differential (PRD) for 1212 sales is 1.009, which is within IAAO standards for the PRD. We also performed a regression analysis between the sales ratio and the assessor's current value to further test for regressivity or progressivity in the residential sales valuation, as follows:

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.968	.003		362.849	.000
	CURRTOT	.000000032	.000	.052	5.745	.000

a. Dependent Variable: salesratio

The slope of the line at 0.000000032 indicates that there is virtually no slope in the regression line, which indicates that sales ratios are similar across the entire sale price array. This indicates no regressivity or progressivity in the residential values assigned by the assessor.

Case Processing Summary

		Count	Percent
SPRec	LT $300K	890	7.3%
	$300K to $350K	1768	14.5%
	$350K to $400K	2631	21.6%
	$400K to $450K	2132	17.5%
	$450K to $500K	1393	11.5%
	$500K to $600K	1546	12.7%
	$600K to $750K	1026	8.4%
	$750K to $1000K	525	4.3%
	Over $1000K	254	2.1%
Overall		12165	100.0%
Excluded		0	
Total		12165	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $300K	1.001	1.014	.120	21.4%
$300K to $350K	.986	1.000	.058	8.5%
$350K to $400K	.982	1.000	.052	7.8%
$400K to $450K	.978	1.000	.055	7.6%
$450K to $500K	.978	1.000	.060	8.5%
$500K to $600K	.973	1.000	.069	9.4%
$600K to $750K	.961	1.000	.084	11.3%
$750K to $1000K	.942	1.001	.096	12.9%
Over $1000K	.932	1.003	.120	15.4%
Overall	.978	1.009	.068	10.7%

The above table indicates no regressivity in the sales ratios across sale price categories.

Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period for any residual market trending and broken down by economic area, as follows:

Coefficients[a]

ECONAREA	Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1.00	1	(Constant)	.986	.002		413.749	.000
		SalePeriod	.000	.000	-.030	-2.399	.016
2.00	1	(Constant)	.986	.003		364.794	.000
		SalePeriod	.000	.000	-.022	-1.521	.128
3.00	1	(Constant)	.990	.015		67.678	.000
		SalePeriod	-.001	.001	-.038	-.702	.483
4.00	1	(Constant)	.999	.017		60.248	.000
		SalePeriod	.000	.001	.015	.337	.737

a. Dependent Variable: salesratio

There was no residual market trending present in the sale ratio data for any of the economic areas; in Economic Area 1, where the marginally statistical significant trend was present, the magnitude of that trend at less than 0.01% per month was not significant. We therefore concluded that the assessor has adequately addressed market trending in the valuation of residential properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median actual value per square foot for 2021 between each group. The data was analyzed for the entire class and stratified by economic area, as follows:

Report
VALSF

sold	N	Median	Mean
UNSOLD	107044	$245	$256
SOLD	13947	$245	$259

Report
VALSF

ECONAREA	sold	N	Median	Mean
1.00	UNSOLD	58286	$243	$255
	SOLD	7498	$241	$256
2.00	UNSOLD	35758	$240	$244
	SOLD	5346	$243	$249
3.00	UNSOLD	6096	$333	$344
	SOLD	608	$336	$350
4.00	UNSOLD	6662	$245	$251
	SOLD	495	$270	$284

We next stratified the comparison by neighborhood with at least 30 sales. All neighborhoods valued residential sold and unsold properties consistently using the value per square foot method.

Report

VALSF

NBHD	sold	N	Median	Mean
18729 0679	UNSOLD	372	$216	$225
	SOLD	35	$213	$222
18729 0896	UNSOLD	80	$212	$224
	SOLD	61	$194	$206
18729 0898	UNSOLD	173	$249	$249
	SOLD	129	$234	$238
18729 1733	UNSOLD	307	$225	$236
	SOLD	30	$230	$238
18729 1997	UNSOLD	318	$235	$242
	SOLD	47	$247	$246
18729 19976	UNSOLD	280	$220	$225
	SOLD	35	$219	$221
18729 8014	UNSOLD	444	$237	$235
	SOLD	68	$236	$233
18729 8017	UNSOLD	195	$249	$245
	SOLD	30	$250	$253
18729 8040	UNSOLD	326	$227	$231
	SOLD	44	$228	$230
18729 8050	UNSOLD	56	$238	$240
	SOLD	50	$245	$242
18933 0398	UNSOLD	223	$232	$233
	SOLD	31	$251	$252
18933 1942	UNSOLD	195	$218	$219
	SOLD	32	$216	$215
18933 1971	UNSOLD	408	$222	$219
	SOLD	69	$219	$221
18933 240768	UNSOLD	58	$303	$279
	SOLD	82	$211	$233
18933 5006	UNSOLD	223	$440	$445
	SOLD	60	$437	$443
18933 5007	UNSOLD	389	$193	$196
	SOLD	82	$184	$192
18933 5008	UNSOLD	108	$227	$230
	SOLD	192	$225	$228
18933 5008001005	UNSOLD	145	$200	$207
	SOLD	47	$195	$200
18933 5010	UNSOLD	134	$288	$283
	SOLD	79	$281	$271
18933 5017	UNSOLD	93	$190	$218
	SOLD	89	$184	$210
18933 80942	UNSOLD	201	$261	$254
	SOLD	32	$260	$251
18933 8098	UNSOLD	439	$221	$227
	SOLD	68	$214	$222
18933 8132	UNSOLD	216	$227	$229
	SOLD	68	$242	$241
	Total	284	$230	$232
18933 8255	UNSOLD	114	$223	$225
	SOLD	252	$216	$221
18933 8330	UNSOLD	132	$215	$223
	SOLD	40	$215	$218
18934 6032	UNSOLD	168	$240	$239

	SOLD	31	$249	$248
18934 6043	UNSOLD	280	$249	$244
	SOLD	42	$248	$247
18934 6045	UNSOLD	140	$193	$195
	SOLD	30	$202	$197
18934 6046	UNSOLD	180	$208	$213
	SOLD	44	$202	$204
18934 6048	UNSOLD	345	$234	$230
	SOLD	61	$230	$225
18934 6051	UNSOLD	91	$160	$153
	SOLD	41	$159	$159
18934 6053	UNSOLD	79	$189	$156
	SOLD	63	$219	$206
18934 6055	UNSOLD	128	$223	$222
	SOLD	96	$225	$225
18934 6067	UNSOLD	97	$192	$195
	SOLD	109	$217	$212
19601 1344	UNSOLD	409	$214	$219
	SOLD	32	$216	$219
19613 1566	UNSOLD	392	$225	$228
	SOLD	33	$233	$238
19613 1838	UNSOLD	203	$202	$215
	SOLD	31	$192	$202
19613 18383	UNSOLD	226	$249	$247
	SOLD	30	$224	$234
19613 1956	UNSOLD	301	$226	$224
	SOLD	57	$237	$230
19613 8045	UNSOLD	217	$250	$238
	SOLD	30	$250	$255
19614 18513	UNSOLD	365	$205	$209
	SOLD	49	$200	$203
19711 1109	UNSOLD	300	$366	$378
	SOLD	36	$431	$429
19711 1202	UNSOLD	290	$295	$300
	SOLD	33	$288	$312
19722 1227	UNSOLD	153	$251	$250
	SOLD	36	$242	$247
19734 1333	UNSOLD	315	$240	$247
	SOLD	31	$250	$255
19836 8116	UNSOLD	176	$302	$290
	SOLD	42	$321	$332
28506 230568	UNSOLD	22	$219	$218
	SOLD	57	$201	$205
28506 2436	UNSOLD	318	$229	$246
	SOLD	50	$235	$243
28506 2694	UNSOLD	274	$223	$224
	SOLD	36	$231	$229
28506 2723	UNSOLD	253	$274	$274
	SOLD	42	$245	$252
28506 2725	UNSOLD	322	$219	$229
	SOLD	200	$228	$227
	Total	522	$222	$228
28506 2736	UNSOLD	191	$254	$257
	SOLD	35	$261	$263
28506 2753	UNSOLD	249	$275	$273
	SOLD	73	$278	$277
28506 5802	UNSOLD	369	$194	$195

	SOLD	89	$194	$197
28506 5802001001	UNSOLD	280	$179	$179
	SOLD	81	$184	$189
28506 5813	UNSOLD	89	$256	$249
	SOLD	71	$257	$250
28623 0455	UNSOLD	250	$244	$246
	SOLD	40	$243	$247
28623 55034	UNSOLD	201	$244	$244
	SOLD	35	$237	$241
28623 5510	UNSOLD	568	$298	$293
	SOLD	132	$299	$300
28623 5513	UNSOLD	247	$256	$255
	SOLD	47	$260	$258
28623 5514	UNSOLD	314	$265	$262
	SOLD	53	$252	$259
28623 5522	UNSOLD	39	$304	$306
	SOLD	57	$307	$305
29414 4065	UNSOLD	167	$293	$309
	SOLD	30	$321	$322
29414 4093	UNSOLD	81	$241	$246
	SOLD	37	$220	$228
29414 4104	UNSOLD	39	$329	$321
	SOLD	32	$410	$377
29414 4114	UNSOLD	215	$221	$220
	SOLD	267	$225	$229
29414 4118	UNSOLD	161	$254	$251
	SOLD	155	$232	$238
29414 4125	UNSOLD	121	$220	$233
	SOLD	144	$251	$244
29502 2340	UNSOLD	276	$212	$220
	SOLD	30	$223	$228
29502 2407	UNSOLD	277	$267	$266
	SOLD	32	$239	$262
29502 2558	UNSOLD	310	$215	$215
	SOLD	63	$216	$216
29502 2624	UNSOLD	271	$230	$230
	SOLD	34	$231	$231
29517 2631	UNSOLD	219	$288	$296
	SOLD	63	$289	$284
	Total	282	$288	$293
29517 2853	UNSOLD	67	$222	$224
	SOLD	85	$228	$232
29522 2130	UNSOLD	219	$249	$251
	SOLD	31	$250	$249
29522 2744009000	UNSOLD	54	$208	$211
	SOLD	41	$200	$204
29522 2803	UNSOLD	137	$309	$307
	SOLD	61	$311	$313
29635 2691	UNSOLD	194	$269	$266
	SOLD	30	$260	$264
29635 2733	UNSOLD	28	$249	$258
	SOLD	35	$232	$237
29635 27331	UNSOLD	270	$295	$282
	SOLD	32	$288	$272
29635 2748	UNSOLD	291	$274	$269
	SOLD	44	$286	$287
29635 2849	UNSOLD	11	$253	$262

	SOLD	49	$254	$249
29635 8510	UNSOLD	289	$254	$255
	SOLD	48	$243	$245
33525 0223	UNSOLD	479	$336	$339
	SOLD	56	$327	$335
33525 3195	UNSOLD	110	$308	$303
	SOLD	38	$324	$319
41428 0151	UNSOLD	291	$312	$314
	SOLD	39	$333	$336
42915 0327	UNSOLD	486	$233	$235
	SOLD	66	$241	$248
43028 0272	UNSOLD	744	$251	$259
	SOLD	91	$253	$258

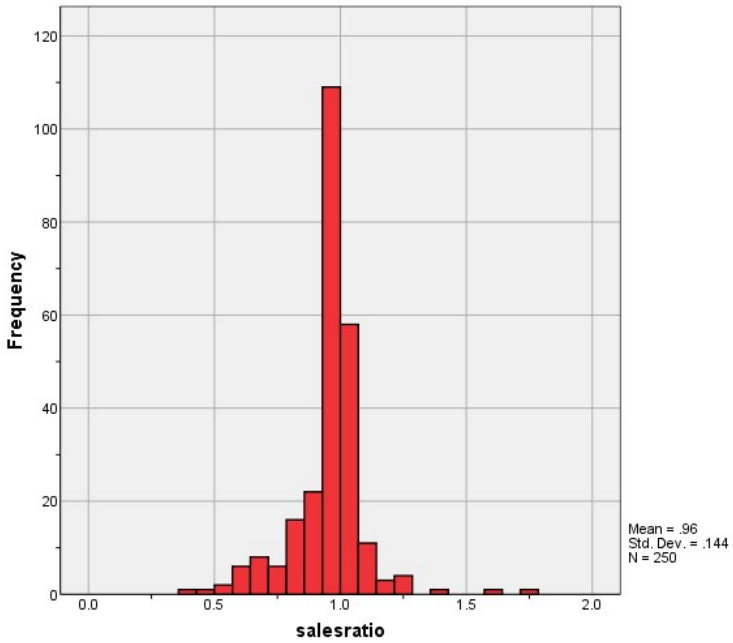
The above results indicate that sold and unsold residential properties were valued in a consistent manner. Some sales were trimmed using IAAO guidelines.

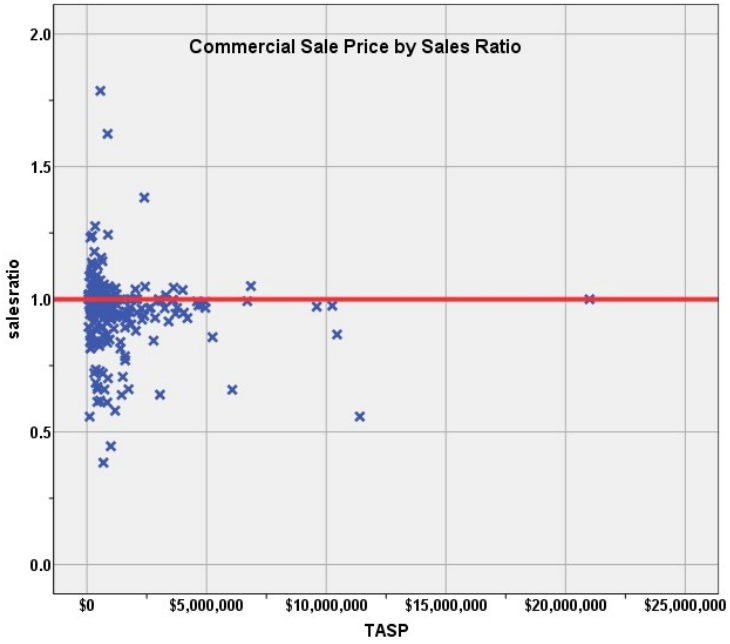
IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 250 qualified commercial and industrial sales for the 24 month period ending June 30, 2020. The sales ratio analysis results were as follows:

Median	**0.978**
Price Related Differential	**1.019**
Coefficient of Dispersion	**8.7**

The above table indicates that the Larimer County vacant land sale ratios were in compliance with the SBOE standards. The following histogram and scatter plot describe the sales ratio distribution further:





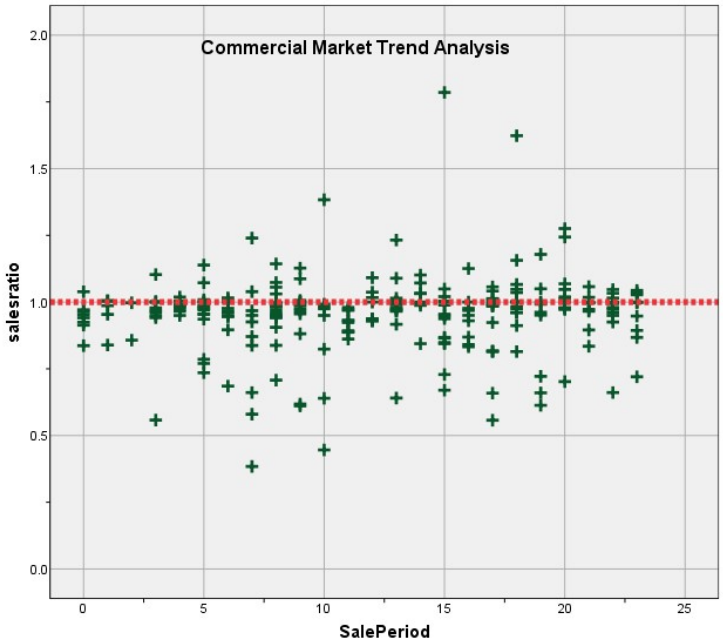
Commercial/Industrial Market Trend Analysis

The assessor did apply market trend adjustments to the vacant land dataset. The commercial/industrial sales were analyzed, examining the sale ratios across the 24 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.935	.019		48.053	.000
	SalePeriod	.002	.001	.076	1.207	.229

a. Dependent Variable: salesratio



There was no statistically significant residual market trending present in the commercial sale ratios; therefore, we concluded that the assessor has adequately considered market trending adjustments as part of the vacant land valuation.

Sold/Unsold Analysis

We compared the median change in actual value for valuation year 2018 and valuation year 2020 between sold and unsold commercial properties, both overall and stratified by subclass, to determine if both groups were valued consistently, as follows:

Report
DIFF

sold	N	Median	Mean
UNSOLD	5621	1.0367	1.0841
SOLD	243	1.1062	1.1798

Report
DIFF

ABSTRIMP	sold	N	Median	Mean
2212.00	UNSOLD	692	1.0013	1.0472
	SOLD	28	1.1782	1.2513
2220.00	UNSOLD	487	1.0109	1.0413
	SOLD	27	1.0560	1.0999
2230.00	UNSOLD	1112	1.0300	1.0766
	SOLD	27	1.0832	1.1861
2235.00	UNSOLD	831	1.1060	1.1485
	SOLD	20	1.2631	1.2910
2245.00	UNSOLD	1830	1.0404	1.0909
	SOLD	100	1.0685	1.1178
3215.00	UNSOLD	118	1.0866	1.1570
	SOLD	7	1.3333	1.3031

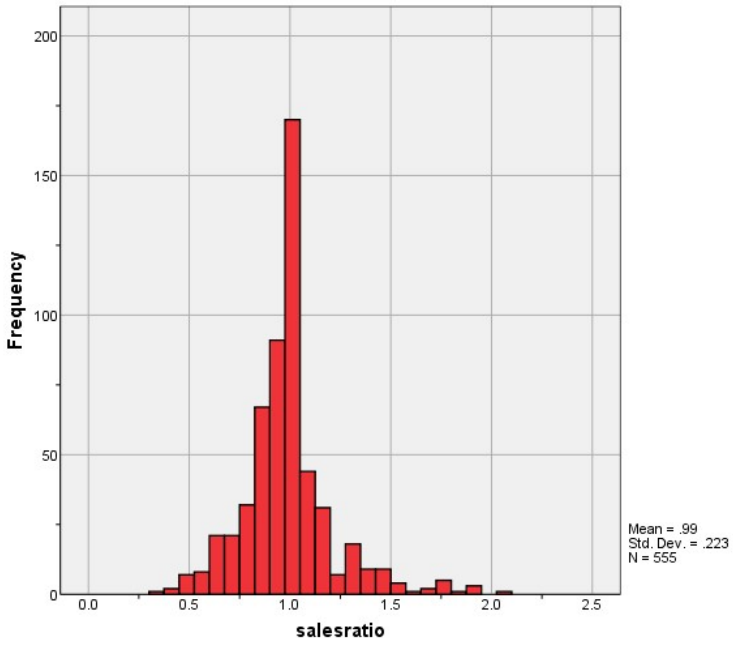
Although the magnitude overall was not significant, we will consult with the assessor's office to review the commercial valuation process. Sold properties for 2212, 2235 and 3215 subclasses tended to be smaller, newer, higher quality and/or superior condition. This likely explains some of the differences between sold and unsold changes in value for these subclasses.

V. VACANT LAND SALE RESULTS

There were 555 qualified vacant land sales for the 24 month period ending June 30, 2020. The sales ratio analysis results were as follows:

Median	**0.990**
Price Related Differential	**1.042**
Coefficient of Dispersion	**14.6**

The above ratio statistics were in compliance overall with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall vacant land sales. The following graphs describe further the sales ratio distribution for these properties:



The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits, while the above scatter plot indicated that there was no price related differential issues. No sales were trimmed.

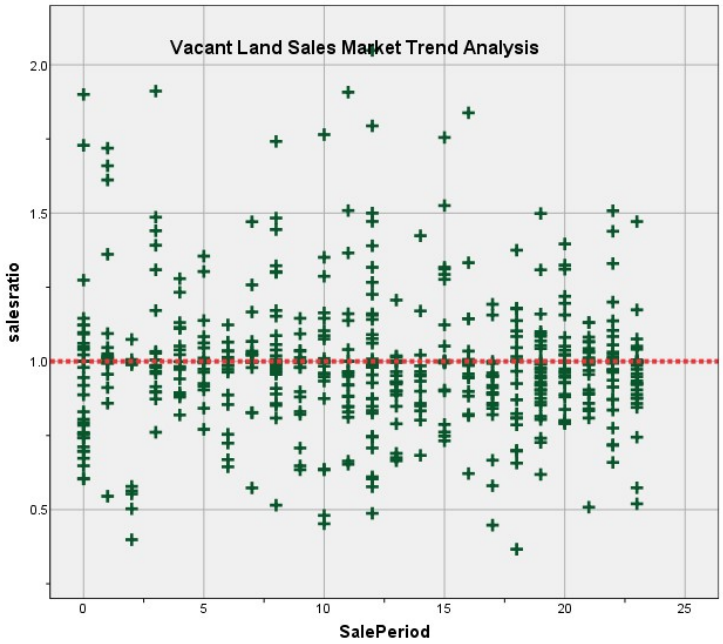
Vacant Land Market Trend Analysis

We next analyzed the vacant land dataset using the 24-month sale period and stratified by economic area, with the following results:

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.006	.019		53.141	.000
	SalePeriod	-.001	.001	-.045	-1.057	.291

a. Dependent Variable: salesratio



The above analysis indicated that no significant market trending was present in the vacant land sale data. We concluded that the assessor has adequately dealt with market trending for vacant land properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold vacant land properties, we compared the median change in actual value for valuation year 2018 and valuation year 2020 between each group, as follows:

Report
DIFF

sold	N	Median	Mean
UNSOLD	9978	1.0000	1.0881
SOLD	526	1.1377	1.1563

We next examined sold and unsold properties with at least 10 sales to determine if sold and unsold properties were valued differently, as follows:

Report
DIFF

SUBDIVNO	sold	N	Median	Mean
0272120	UNSOLD	99	1.2069	1.1520
	SOLD	11	1.2069	1.1935
0272130	UNSOLD	47	1.0857	1.1312
	SOLD	12	1.0857	1.1101
0327120	UNSOLD	117	1.5692	1.4847
	SOLD	13	1.5692	1.4489
03279	UNSOLD	43	1.5045	1.4522
	SOLD	10	1.4444	1.4594
0923001000	UNSOLD	13	.4382	.5246
	SOLD	12	.4382	.4382

2631027000	UNSOLD	10	1.0000	1.0245
	SOLD	15	1.0818	1.1133
4104003000	UNSOLD	109	.9680	.9718
	SOLD	16	.9680	.9680
5006003001	UNSOLD	28	.8696	.9739
	SOLD	10	1.3304	1.3304

Overall, we concluded that the county assessor valued sold and unsold vacant properties consistently.

V. CONCLUSIONS

Based on this 2021 audit statistical analysis for Larimer County, residential, commercial industrial and vacant land properties were found to be in compliance with state guidelines.

STATISTICAL ABSTRACT

Residential

Ratio Statistics for CURRTOT / TASP

ECONAREA	Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
		Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
1.00	.981	.979	.984	.978	.976	.979	95.2%	.975	.972	.977	1.007	.065	10.0%
2.00	.982	.980	.985	.979	.977	.981	95.1%	.973	.970	.976	1.010	.063	10.0%
3.00	.981	.967	.995	.976	.966	.989	95.9%	.974	.959	.988	1.007	.095	13.3%
4.00	1.003	.987	1.020	.977	.963	.989	95.2%	.977	.962	.992	1.027	.133	18.8%

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.

Commercial Land

Ratio Statistics for CURRTOT / TASP

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
.955	.937	.973	.976	.969	.985	95.0%	.938	.904	.971	1.019	.087	15.1%

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.

Vacant Land

Ratio Statistics for CURRLND / TASP

Mean	95% Confidence Interval for Mean		Median	95% Confidence Interval for Median			Weighted Mean	95% Confidence Interval for Weighted Mean		Price Related Differential	Coefficient of Dispersion	Coefficient of Variation
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
.989	.970	1.007	.990	.979	.997	95.8%	.948	.929	.968	1.042	.146	22.6%

The confidence interval for the median is constructed without any distribution assumptions. The actual coverage level may be greater than the specified level. Other confidence intervals are constructed by assuming a Normal distribution for the ratios.

Residential Median Ratio Stratification

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	12135	99.8%
	1213.50	1	0.0%
	1215.00	3	0.0%
	1230.00	17	0.1%
	1713.50	1	0.0%
	1716.00	1	0.0%
	1718.50	1	0.0%
	1721.00	4	0.0%
	9249.00	1	0.0%
	9250.00	1	0.0%
Overall		12165	100.0%
Excluded		0	
Total		12165	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.978	1.009	.068	10.7%
1213.50	.996	1.000	.000	.
1215.00	1.101	1.003	.118	20.6%
1230.00	.952	1.002	.032	4.1%
1713.50	1.017	1.000	.000	.
1716.00	1.000	1.000	.000	.
1718.50	.963	1.000	.000	.
1721.00	1.037	1.000	.019	2.8%
9249.00	.576	1.000	.000	.
9250.00	.736	1.000	.000	.
Overall	.978	1.009	.068	10.7%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	275	2.3%
	75 to 100	153	1.3%
	50 to 75	969	8.0%
	25 to 50	3382	27.8%
	5 to 25	4211	34.6%
	5 or Newer	3175	26.1%
Overall		12165	100.0%
Excluded		0	
Total		12165	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.968	1.038	.142	20.2%
75 to 100	.969	1.026	.126	19.0%
50 to 75	.974	1.019	.099	15.0%
25 to 50	.976	1.008	.074	12.2%
5 to 25	.983	1.005	.057	8.5%
5 or Newer	.975	1.008	.057	7.9%
Overall	.978	1.009	.068	10.7%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	31	0.3%
	500 to 1,000 sf	664	5.5%
	1,000 to 1,500 sf	3392	27.9%
	1,500 to 2,000 sf	4196	34.5%
	2,000 to 3,000 sf	3155	25.9%
	3,000 sf or Higher	727	6.0%
Overall		12165	100.0%
Excluded		0	
Total		12165	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	1.023	1.071	.209	27.8%
500 to 1,000 sf	.951	1.020	.107	19.2%
1,000 to 1,500 sf	.975	1.007	.065	10.6%
1,500 to 2,000 sf	.978	1.007	.058	8.7%
2,000 to 3,000 sf	.986	1.012	.069	10.2%
3,000 sf or Higher	.988	1.009	.087	11.9%
Overall	.978	1.009	.068	10.7%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	9114	74.9%
	Average Plus	1918	15.8%
	Excellent	1	0.0%
	Fair	417	3.4%
	Good	576	4.7%
	Good Plus	91	0.7%
	Low	11	0.1%
	Very Good	37	0.3%
Overall		12165	100.0%
Excluded		0	
Total		12165	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.977	1.008	.062	9.7%
Average Plus	.991	1.010	.072	10.0%
Excellent	.974	1.000	.000	.
Fair	.948	1.026	.123	22.1%
Good	.986	1.019	.097	13.1%
Good Plus	1.001	1.014	.105	13.1%
Low	.931	1.120	.235	30.2%
Very Good	1.030	1.020	.153	18.5%
Overall	.978	1.009	.068	10.7%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	Average	12153	99.9%
	Badly Worn	1	0.0%
	Good	10	0.1%
	Worn Out	1	0.0%
Overall		12165	100.0%
Excluded		0	
Total		12165	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.978	1.009	.068	10.7%
Badly Worn	.815	1.000	.000	.
Good	.976	1.025	.098	15.7%
Worn Out	.648	1.000	.000	.
Overall	.978	1.009	.068	10.7%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$50K to $100K	7	2.8%
	$100K to $150K	7	2.8%
	$150K to $200K	14	5.6%
	$200K to $300K	28	11.2%
	$300K to $500K	52	20.8%
	$500K to $750K	33	13.2%
	$750K to $1,000K	33	13.2%
	Over $1,000K	76	30.4%
Overall		250	100.0%
Excluded		0	
Total		250	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$50K to $100K	1.012	.995	.035	5.8%
$100K to $150K	.944	.986	.154	22.5%
$150K to $200K	.971	.995	.088	11.2%
$200K to $300K	1.001	1.002	.052	7.8%
$300K to $500K	.979	1.000	.079	12.9%
$500K to $750K	.983	1.004	.126	22.3%
$750K to $1,000K	.974	1.002	.095	18.6%
Over $1,000K	.967	1.004	.078	13.1%
Overall	.976	1.019	.087	14.9%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	2	0.8%
	1220.00	1	0.4%
	1712.00	7	2.8%
	1713.50	2	0.8%
	1716.00	3	1.2%
	1721.00	2	0.8%
	1880.67	1	0.4%
	1964.25	2	0.8%
	2047.83	1	0.4%
	2212.00	29	11.6%
	2215.00	1	0.4%
	2220.00	27	10.8%
	2223.50	2	0.8%
	2225.00	3	1.2%
	2227.50	3	1.2%
	2230.00	31	12.4%
	2235.00	21	8.4%
	2240.00	1	0.4%
	2245.00	100	40.0%
	3215.00	7	2.8%
	3230.00	2	0.8%
	6237.00	1	0.4%
	9279.00	1	0.4%
Overall		250	100.0%
Excluded		0	
Total		250	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.967	.999	.006	0.8%
1220.00	1.786	1.000	.000	.
1712.00	.955	.992	.034	5.3%
1713.50	.982	1.001	.054	7.6%
1716.00	1.002	.995	.018	3.7%

1721.00	.996	1.001	.004	0.6%
1880.67	.978	1.000	.000	.
1964.25	.903	.980	.070	9.9%
2047.83	.994	1.000	.000	.
2212.00	.961	1.106	.102	14.8%
2215.00	.837	1.000	.000	.
2220.00	.997	.993	.040	8.7%
2223.50	.988	.991	.025	3.5%
2225.00	.978	1.051	.107	19.5%
2227.50	.889	.978	.040	6.0%
2230.00	.959	1.030	.095	16.7%
2235.00	.970	1.045	.086	18.6%
2240.00	.997	1.000	.000	.
2245.00	.985	1.020	.099	15.1%
3215.00	.966	.968	.050	9.2%
3230.00	.930	.941	.067	9.5%
6237.00	.979	1.000	.000	.
9279.00	.989	1.000	.000	.
Overall	.976	1.019	.087	14.9%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	16	6.4%
	75 to 100	9	3.6%
	50 to 75	29	11.6%
	25 to 50	73	29.2%
	5 to 25	105	42.0%
	5 or Newer	18	7.2%
Overall		250	100.0%
Excluded		0	
Total		250	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.988	.993	.038	5.4%
75 to 100	.923	1.029	.073	8.9%
50 to 75	.975	1.015	.045	8.0%
25 to 50	.974	1.034	.109	19.8%
5 to 25	.980	1.001	.084	12.6%
5 or Newer	.972	1.048	.126	21.5%
Overall	.976	1.019	.087	14.9%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	4	1.6%
	500 to 1,000 sf	17	6.8%
	1,000 to 1,500 sf	37	14.8%
	1,500 to 2,000 sf	22	8.8%
	2,000 to 3,000 sf	35	14.0%
	3,000 sf or Higher	135	54.0%
Overall		250	100.0%
Excluded		0	
Total		250	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.972	1.007	.044	5.6%
500 to 1,000 sf	.988	.993	.068	12.7%
1,000 to 1,500 sf	.980	1.002	.072	10.8%
1,500 to 2,000 sf	.985	1.027	.111	18.4%
2,000 to 3,000 sf	.977	1.035	.106	15.4%
3,000 sf or Higher	.971	1.018	.085	15.8%
Overall	.976	1.019	.087	14.9%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	180	72.0%
	Average Plus	22	8.8%
	Fair	7	2.8%
	Good	40	16.0%
	Very Good	1	0.4%
Overall		250	100.0%
Excluded		0	
Total		250	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.975	1.032	.097	16.6%
Average Plus	.988	.992	.042	5.7%
Fair	.969	1.029	.096	12.5%
Good	.982	1.000	.059	9.3%
Very Good	.659	1.000	.000	.
Overall	.976	1.019	.087	14.9%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	Average	220	88.0%
	Good	23	9.2%
	Very Good	7	2.8%
Overall		250	100.0%
Excluded		0	
Total		250	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.977	1.026	.084	14.7%
Good	.950	.949	.122	17.0%
Very Good	.997	1.048	.056	10.7%
Overall	.976	1.019	.087	14.9%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	28	5.0%
	$25K to $50K	95	17.1%
	$50K to $100K	97	17.5%
	$100K to $150K	72	13.0%
	$150K to $200K	88	15.9%
	$200K to $300K	97	17.5%
	$300K to $500K	63	11.4%
	$500K to $750K	12	2.2%
	$750K to $1,000K	2	0.4%
	Over $1,000K	1	0.2%
Overall		555	100.0%
Excluded		0	
Total		555	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.010	1.006	.221	36.0%
$25K to $50K	1.000	1.022	.169	26.0%
$50K to $100K	.978	1.007	.207	27.9%
$100K to $150K	.996	.994	.154	22.8%
$150K to $200K	1.000	1.000	.088	13.6%
$200K to $300K	.960	1.003	.101	14.4%
$300K to $500K	.933	1.006	.112	15.4%
$500K to $750K	.979	.997	.198	32.1%

$750K to $1,000K	.977	1.002	.055	7.7%
Over $1,000K	1.000	1.000	.000	.
Overall	.990	1.042	.146	22.5%

Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	100.00	259	46.7%
	200.00	20	3.6%
	400.00	57	10.3%
	510.00	3	0.5%
	520.00	6	1.1%
	530.00	6	1.1%
	540.00	7	1.3%
	550.00	32	5.8%
	1112.00	147	26.5%
	1115.00	1	0.2%
	1135.00	1	0.2%
	1616.00	1	0.2%
	1618.50	1	0.2%
	2112.00	2	0.4%
	2130.00	8	1.4%
	2135.00	2	0.4%
	3115.00	1	0.2%
	9129.00	1	0.2%
Overall		555	100.0%
Excluded		0	
Total		555	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	.996	1.049	.157	23.9%
200.00	.905	1.029	.188	26.1%
400.00	.978	1.056	.197	29.1%
510.00	1.000	1.017	.043	7.9%
520.00	.983	.975	.087	15.2%
530.00	.985	1.027	.105	21.8%
540.00	1.000	1.028	.117	21.8%
550.00	.992	1.045	.130	18.2%
1112.00	.993	1.041	.122	19.3%
1115.00	.980	1.000	.000	.
1135.00	.727	1.000	.000	.
1616.00	.974	1.000	.000	.
1618.50	1.030	1.000	.000	.
2112.00	1.014	.996	.017	2.5%
2130.00	.972	.996	.044	7.0%
2135.00	1.100	1.053	.091	12.9%
3115.00	.997	1.000	.000	.
9129.00	.933	1.000	.000	.
Overall	.990	1.042	.146	22.5%