2019
LARIMER COUNTY
PROPERTY ASSESSMENT
STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

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Audit Division

September 15, 2019

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

RE: Final Report for the 2019 Colorado Property Assessment Study

Dear Ms. Mullis:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2019 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
Project Manager
Wildrose Appraisal Inc. – Audit Division

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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.

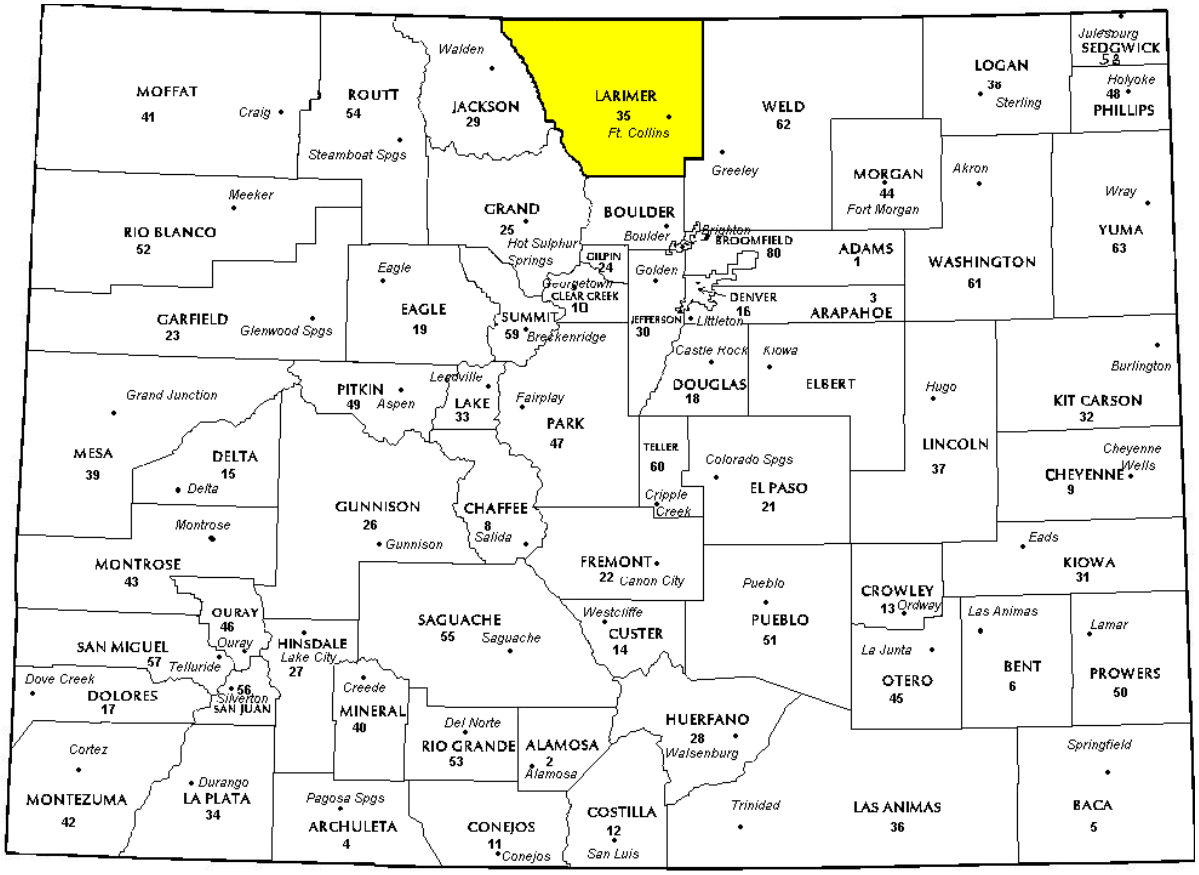
Statistical analysis is performed on vacant land, residential properties, commercial industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax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

Wildrose Audit has completed the Property Assessment Study for 2019 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 had an estimated population of approximately 339,993 people with 131.0 people per square mile, according to the U.S. Census Bureau's 2016 estimated census data. This represents a 13.5 percent change from April 1, 2010 to July 1, 2016.

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, 2017 through June 30, 2018. 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
Condominium	Between .95-1.05	Less than 15.99
Single Family	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	504	0.975	1.032	7.2	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	14,847	0.999	1.008	7.1	Compliant
Vacant Land	1,043	0.960	1.063	18.9	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
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

Conclusions

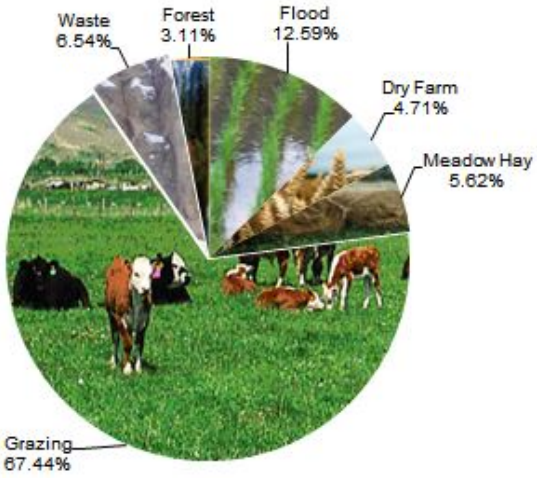
After applying the above described methodologies, it is concluded that Larimer County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

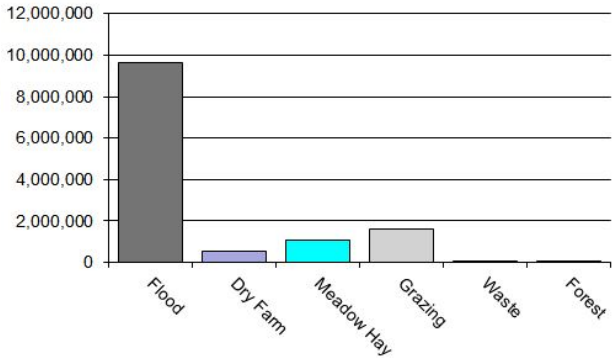
None

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	49,237	196.16	9,658,599	9,752,168	0.99
4127	Dry Farm	18,419	30.51	562,010	581,931	0.97
4137	Meadow Hay	21,983	49.90	1,097,029	1,097,029	1.00
4147	Grazing	263,735	6.15	1,621,812	1,621,812	1.00
4177	Forest	12,161	6.48	78,813	79,098	1.00
4167	Waste	25,559	2.39	60,979	60,979	1.00
Total/Avg		**391,095**	**33.44**	**13,079,241**	**13,193,017**	**0.99**

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
- Field Inspections
- In-Person Interviews with Owners/Tenants
- Written Correspondence other than Questionnaire
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

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
- Field Inspections
- In-Person Interviews with Owners/Tenants
- Personal Knowledge of Occupants at Assessment Date
- 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 2019 for Larimer County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 280 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.

The following subclasses were analyzed for Larimer County:

2112 Merchandising
2130 Special Purpose
3115 Manufacturing/Processing
3215 Manufacturing/Processing

Conclusions

Larimer County appears to be doing a good 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 2019 in Larimer County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14) and by applying the recommended methodology in ARL Vol 3, Chap 4. Subdivision Discounting in the intervening year can be accomplished by reducing the absorption period by one year.

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 2019 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 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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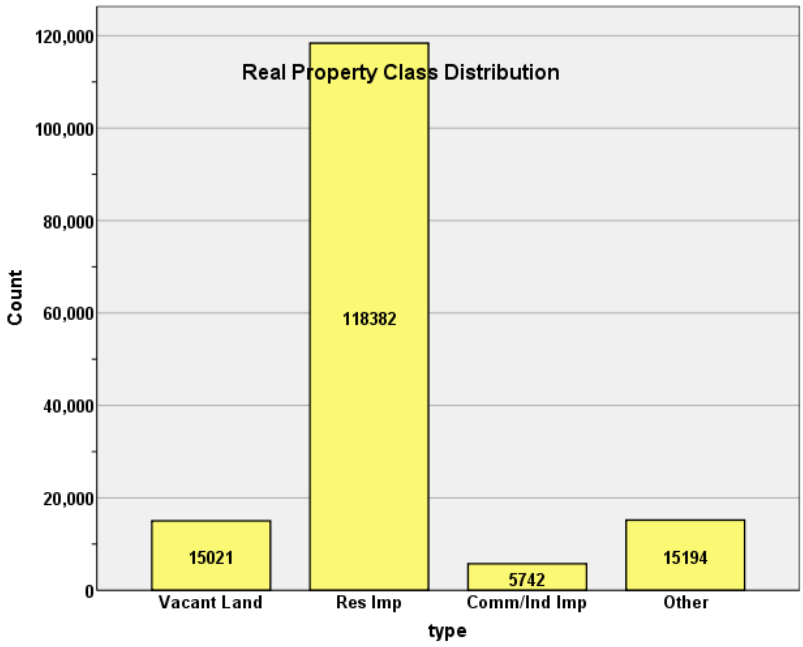
STATISTICAL APPENDIX

STATISTICAL COMPLIANCE REPORT
FOR LARIMER COUNTY
2019

I. OVERVIEW

Larimer County is a northern county located along Colorado's Front Range urban corridor. The county has a total of 154,339 real property parcels, according to data submitted by the county assessor's office in 2019. 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 74.8% of all vacant land parcels.

For residential improved properties, single family properties accounted for 87.4% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 3.7% of all such properties in this county.

Based on the Audit questionnaire filled out by the assessor (see below), the following geographic levels were used by the assessor to value residential, commercial and vacant land properties, along with notes from the assessor regarding thus stratification:

Geo Area	Residential	Comm/Ind	Vacant Land
Economic Area	*V*	*V*	*V*
Neighborhood	*V*	*N*	*N*
Subdivision	*N*	*N*	***N***

Codes
***V**=Valid Geographic Level – used for modeling*
***N** = Not used as Geographic Level for modeling*

Note: While adjustments were made based on lower levels (subdivision for Res and Neighborhood and Subs for Comm and Vacant) the modeling was not done at this level as indicated by the N

II. DATA FILES

The following sales analyses were based on the requirements of the 2019 Colorado Property Assessment Study. Information was provided by the Larimer Assessor's Office in April 2019. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 14,847 qualified residential sales for the 24-month period ending June 30, 2018. The sales ratio analysis results were as follows:

Median	**0.999**
Price Related Differential	**1.008**
Coefficient of Dispersion	**7.1**

We next stratified the sale ratio analysis by economic area and neighborhood. The minimum count for the neighborhood stratification is 20 sales. The following are the results of this stratification analysis:

Economic Area

Case Processing Summary

		Count	Percent
ECONAREA	EA1	8058	54.3%
	EA2	5547	37.4%
	EA3	676	4.6%
	EA4	566	3.8%
Overall		14847	100.0%
Excluded		0	
Total		14847	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
EA1	.999	1.007	.068
EA2	.999	1.009	.068
EA3	.999	1.006	.091
EA4	.999	1.012	.126
Overall	.999	1.008	.071

B. Neighborhoods with 20 or more sale

Ratio Statistics for CURRTOT / TASP

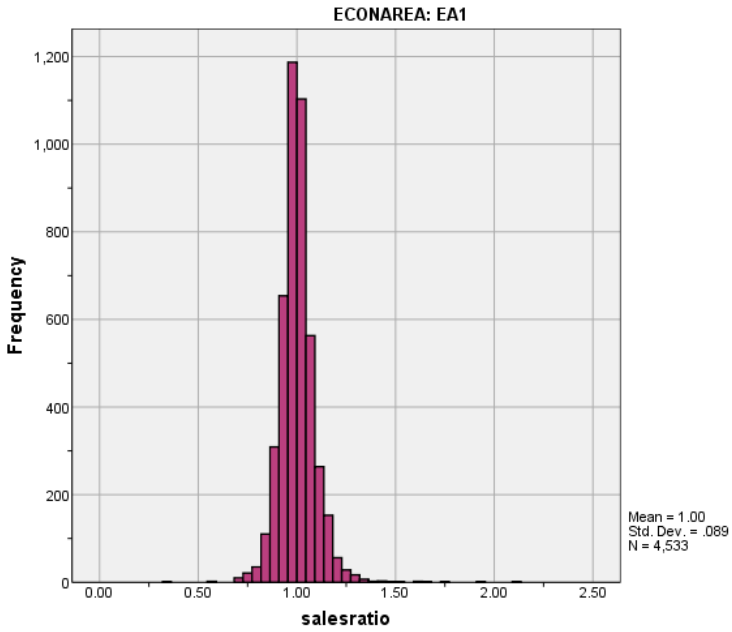
Group	Median	Price Related Differential	Coefficient of Dispersion
18729 0679	1.002	1.001	.062
18729 0896	.994	1.004	.057
18729 0898	.999	1.011	.075
18729 1367	.998	1.003	.071
18729 1733	1.005	.998	.038
18729 1751	.999	1.001	.040
18729 1756	.993	1.000	.082
18729 1833	1.005	.999	.060
18729 1842	.997	.999	.061
18729 1997	.990	1.003	.060
18729 19976	1.002	.999	.041
18729 8014	.992	1.000	.041
18729 8017	1.000	.999	.027
18729 8040	1.000	1.001	.049
18729 8050	1.001	1.001	.041
18729 8085	1.010	1.004	.047
18729 8087	.968	1.001	.027
18729 8174	.996	1.000	.067
18729 8343	.996	1.006	.045
18933 0398	.994	1.026	.113
18933 1942	.999	1.000	.034
18933 1946	.990	.999	.068
18933 1971	.998	1.000	.060
18933 1996	1.000	1.002	.032
18933 5006	.999	1.022	.085
18933 5007	1.000	.999	.052
18933 5007001002	.998	1.011	.086
18933 5008	1.001	1.002	.043
18933 5008001005	1.002	1.004	.057
18933 5013	.999	1.020	.107
18933 5017	1.001	.999	.050
18933 6032	.999	1.002	.065
18933 6035	1.000	1.000	.046
18933 6040	.964	1.009	.050
18933 6043	1.001	1.006	.070
18933 6045	1.000	.999	.047
18933 6046	1.002	1.003	.049
18933 60472	.998	1.001	.052
18933 60473	.998	1.000	.041
18933 60474	.999	1.000	.042
18933 6048	1.000	1.002	.040
18933 6051	.997	1.002	.031

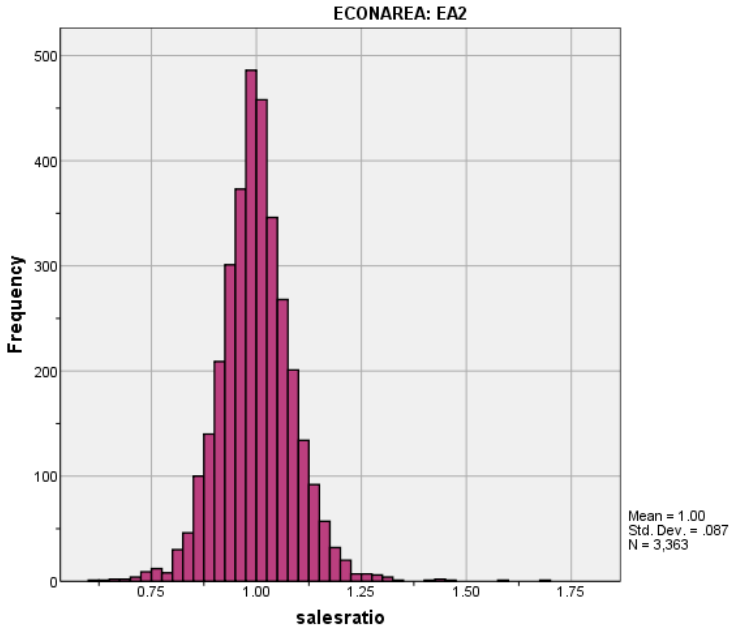
18933 6052	1.006	1.013	.063
18933 6053	1.023	1.002	.066
18933 6055	1.001	1.001	.046
18933 6064	1.001	1.001	.038
18933 8094	.998	1.004	.087
18933 80942	.996	.998	.082
18933 8098	.998	1.000	.055
18933 8098001004	1.001	1.001	.043
18933 8108	1.001	.999	.060
18933 8132	1.002	1.000	.052
18933 8151	1.027	1.000	.026
18933 8330	.998	.998	.057
19601 0406	1.013	1.003	.075
19601 1344	1.002	1.004	.063
19601 1623	.997	1.006	.071
19601 1872	.982	1.000	.033
19601 1976	**.948**	**1.012**	**.083**
19613 03972	.983	1.007	.089
19613 0619	.998	1.001	.059
19613 0637	1.000	1.050	.089
19613 06372	1.003	.999	.066
19613 1566	1.026	.999	.076
19613 1740	1.032	1.011	.080
19613 1814	.966	.998	.083
19613 1838	.990	1.004	.070
19613 18382	.985	.997	.051
19613 18383	.987	.996	.063
19613 1855	.987	1.000	.068
19613 1956	.996	.997	.042
19613 8045	1.028	.999	.058
19613 8215	1.020	1.003	.069
19613 8241	1.036	1.007	.055
19614 1851	.996	1.002	.060
19614 18513	1.009	.999	.064
19614 800001	.953	.983	.104
19614 80003	.987	.996	.073
19711 1019	.981	1.000	.109
19711 1028	1.024	1.017	.109
19711 1109	1.065	1.010	.131
19711 1202	.967	1.017	.113
19711 1326	**.947**	**1.009**	**.084**
19715 1048	1.005	1.004	.087
19715 1120	1.034	1.016	.089
19715 1121	1.012	1.006	.068
19715 1974	.986	1.001	.027
19722 10131	.958	1.014	.099
19722 10133	.952	1.015	.073
19722 1227	1.008	.997	.083
19722 13562	1.003	1.001	.075
19722 1605	1.001	.999	.050
19722 1887	1.013	1.002	.079
19722 8200	.996	1.000	.028
19722 8237	1.007	1.006	.067
19724 1143	1.001	1.010	.090
19724 11747	1.004	1.007	.090
19724 1176	.971	1.012	.093
19724 11773	1.018	1.010	.115

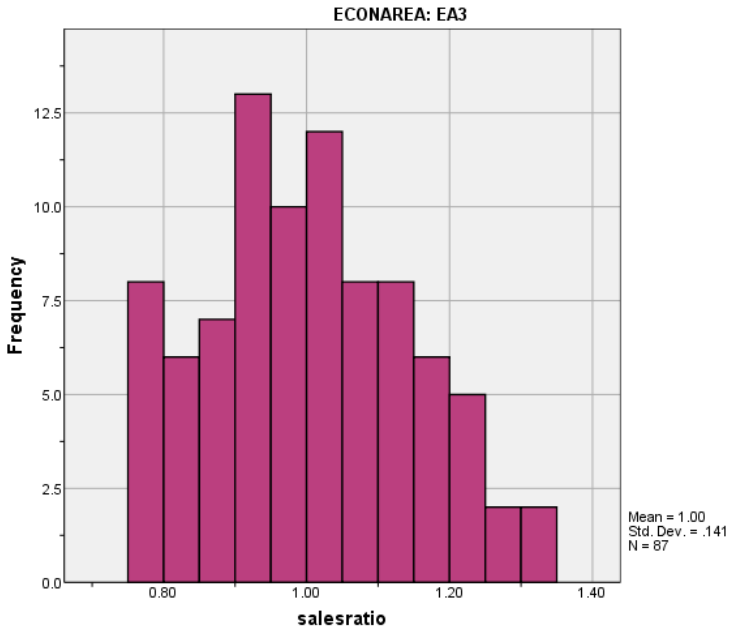
19724 1196	1.016	1.003	.074
19724 1212	1.001	1.002	.040
19724 1291	.991	1.001	.065
19724 1387	1.021	1.023	.126
19724 8181	.993	1.001	.043
19724 8319	1.036	1.004	.032
19734 1319	.969	1.002	.076
19734 1333	.985	1.001	.096
19734 1351	1.016	1.003	.067
19734 1447	.997	1.002	.073
19734 1717	1.035	1.003	.063
19734 1718	1.007	1.005	.071
19734 8170	.984	1.001	.046
19829 0212	.980	1.008	.165
19829 8260	.997	1.011	.045
19836 8116	.994	.998	.058
199 X	.994	1.046	.061
28506 2145	.998	1.004	.074
28506 2436	1.006	1.001	.058
28506 2694	1.025	.998	.059
28506 2698	.980	1.060	.118
28506 2723	1.032	1.005	.068
28506 2725	.997	.995	.079
28506 2736	.998	1.002	.061
28506 2753	1.006	1.001	.042
28506 5802	.997	.999	.060
28506 5802001001	.976	1.000	.075
28506 5803	.979	1.005	.061
28506 5813	1.008	1.009	.076
28623 0455	1.010	1.002	.093
28623 5502	1.012	1.008	.069
28623 55033	1.005	.997	.046
28623 55034	.993	1.000	.090
28623 5507	.977	1.008	.071
28623 5510	1.001	1.014	.084
28623 5513	1.007	1.002	.073
28623 5514	.994	1.009	.069
28623 6034	1.004	.999	.068
29414 0012	.989	1.005	.065
29414 4039	.998	1.000	.060
29414 4065	1.000	1.000	.086
29414 4080	.988	1.006	.061
29414 4093	.994	1.003	.053
29414 4114	.995	1.002	.052
29414 4118	.996	1.002	.041
29414 4123	1.002	1.001	.047
29414 4125	.999	.999	.048
29502 2187	1.009	1.009	.076
29502 21986	1.001	1.004	.086
29502 2223	.998	1.004	.071
29502 2274	.998	1.002	.067
29502 2340	.998	1.000	.043
29502 2407	1.002	.997	.063
29502 2558	.975	1.000	.067
29502 2561	.971	1.001	.059
29502 25619	1.006	1.000	.066
29502 2624	1.008	1.005	.055

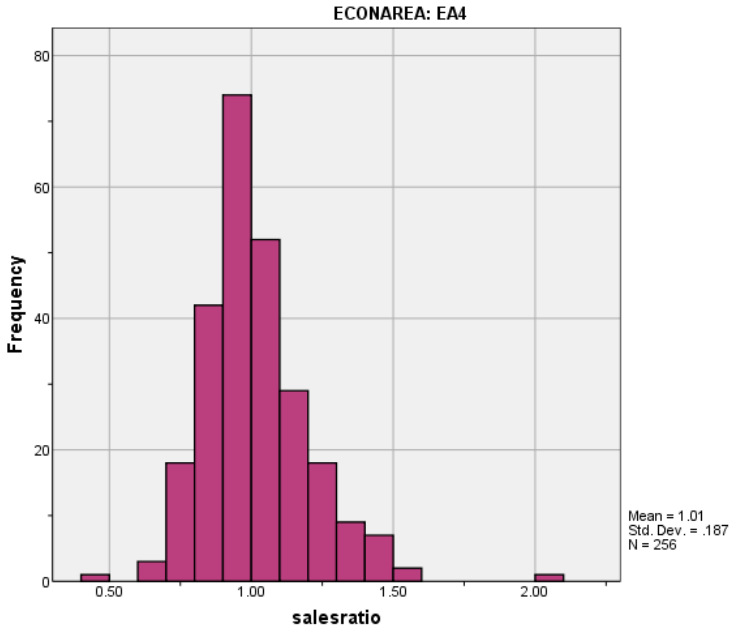
29502 2686	1.001	1.000	.062
29502 2742	1.000	1.001	.059
29517 2631	1.004	1.010	.069
29517 2631014000	**.917**	**.992**	**.079**
29517 26312	.994	.997	.074
29517 26317	.992	1.000	.054
29517 2768	1.007	.999	.056
29517 2792	1.009	1.025	.091
29522 2032	.985	1.023	.127
29522 2130	1.002	1.001	.050
29522 2246	.997	.999	.077
29522 2290	.997	1.002	.058
29522 24015	1.005	.998	.054
29522 24017	.996	.998	.063
29522 2469	1.004	1.004	.092
29522 2613	1.000	.998	.053
29522 2688	1.000	1.001	.063
29522 2690	1.002	.997	.075
29522 2716301	.990	.999	.059
29522 2744	1.003	1.002	.058
29522 2744008000	1.002	1.004	.055
29522 2744009000	1.001	1.004	.066
29522 2744010000	.999	.999	.043
29522 2744016000	.995	1.000	.052
29522 2756	.997	1.000	.034
29522 2803	.985	1.002	.055
29522 8520	1.001	1.002	.041
29635 2321	.991	1.002	.061
29635 2691	1.002	1.000	.037
29635 2704	.983	1.000	.051
29635 27331	.997	1.006	.068
29635 2748	.994	1.002	.061
29635 8510	.979	1.014	.093
299 X	.986	1.047	.050
33525 0223	.997	.999	.117
33525 3195	1.001	1.017	.112
41428 0151	1.000	1.013	.115
41626 0252	1.003	.998	.107
42915 0327	**1.002**	**.998**	**.161**
43028 0272	.988	1.023	.135
43028 0435	.981	1.034	.108
Overall	.998	1.008	.066

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. Four neighborhoods with at least 20 sales were outside of the standards for either the median sales ratio or the COD; the assessor's office has been advised concerning these neighborhoods. The following graphs describe further the sales ratio distribution for these properties:


ECONAREA: EA1
Frequency
1,200
1,000
800
600
400
200
0
0.00
0.50
1.00
1.50
2.00
2.50
salesratio
Mean = 1.00
Std. Dev. = .089
N = 4,533


ECONAREA: EA2
Frequency
500
400
300
200
100
0
0.75
1.00
1.25
1.50
1.75
salesratio
Mean = 1.00
Std. Dev. = .087
N = 3,363





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

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.
EA1	1	(Constant)	1.011	.003		398.722	.000
		SalePeriod	-.001	.000	-.056	-3.793	.000
EA2	1	(Constant)	1.005	.003		356.258	.000
		SalePeriod	.000	.000	-.037	-2.173	.030
EA3	1	(Constant)	.997	.027		37.104	.000
		SalePeriod	.001	.002	.035	.319	.751
EA4	1	(Constant)	.995	.023		42.493	.000
		SalePeriod	.002	.002	.062	.986	.325

a. Dependent Variable: salesratio

There was no residual market trending present in the sale ratio data for any of the economic areas; in Economic Areas 1 and 2, where marginally statistical significant trend were present, the magnitude of those trends (each at or less than 0.1% 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 2019 between each group. The data was analyzed for the entire class and stratified by economic area, as follows:

Report
VALSF

ECONAREA	sold	N	Median	Mean
EA1	UNSOLD	55392	$239	$249
	SOLD	7980	$235	$246
EA2	UNSOLD	33736	$228	$231
	SOLD	5546	$229	$235
EA3	UNSOLD	5868	$294	$299
	SOLD	640	$296	$310
EA4	UNSOLD	6619	$220	$222
	SOLD	562	$237	$242
Total	UNSOLD	101862	$237	$244
	SOLD	14728	$235	$245
	Total	116590	$237	$244

We next stratified the comparison by neighborhood with at least 20 sales. All 170 neighborhoods valued residential sold and unsold properties consistently using the value per square foot method, the median percent change for taxable years 2018 and 2019 method or both.

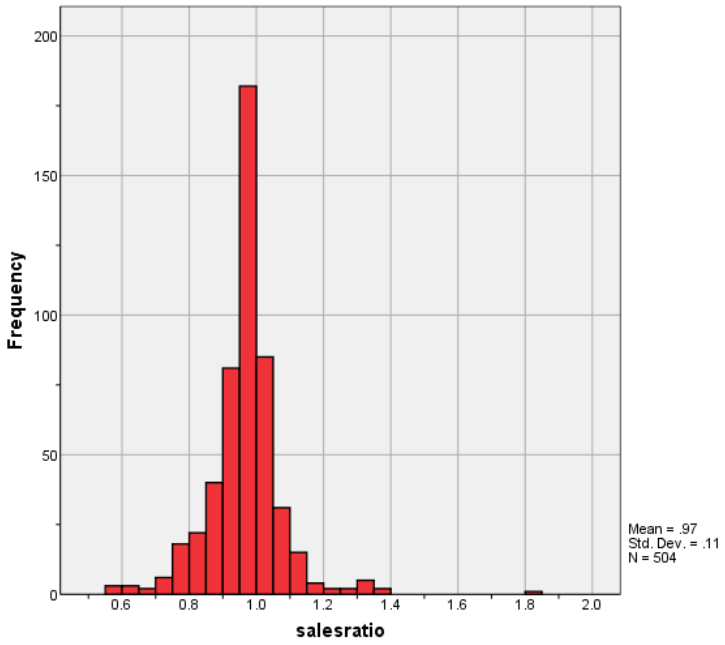
The above results indicate that sold and unsold residential properties were valued in a consistent manner. Some sales were trimmed due to extreme values.

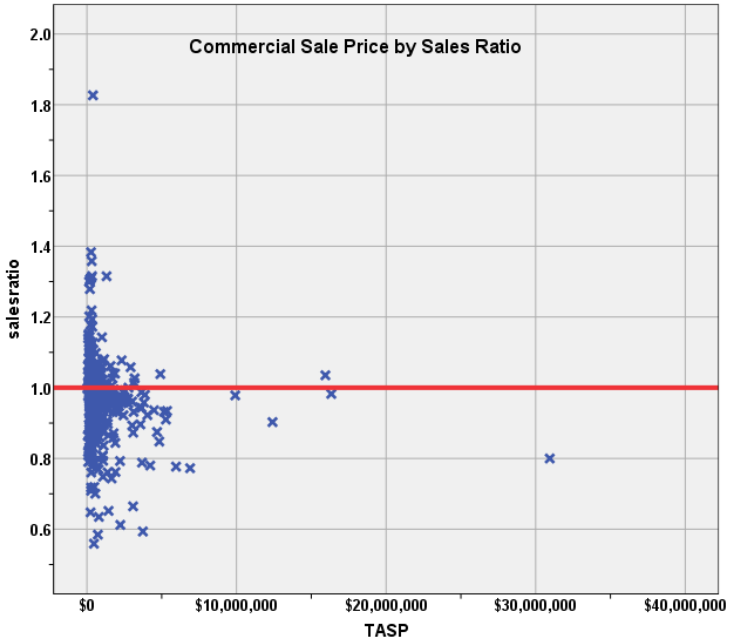
IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 504 qualified commercial and industrial sales for the 60 month period ending June 30, 2018. The sales ratio analysis results were as follows:

Median	**0.975**
Price Related Differential	**1.032**
Coefficient of Dispersion	**7.2**

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





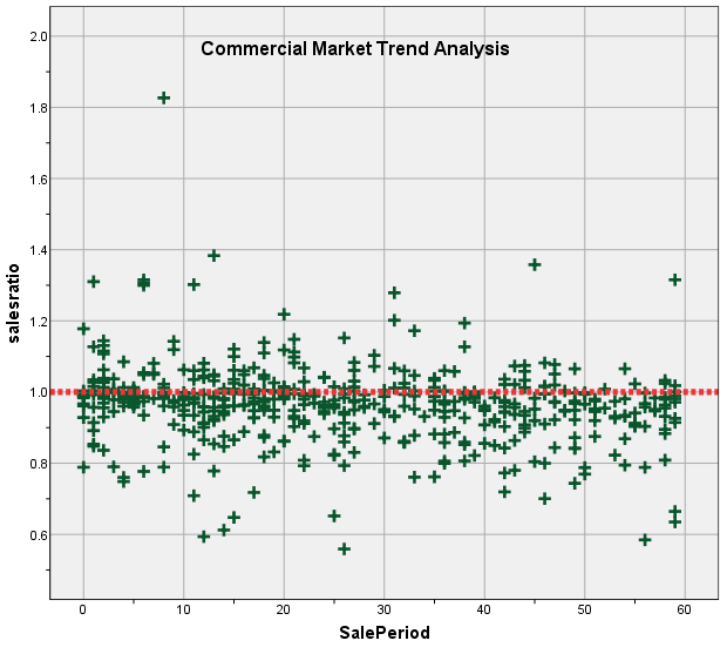
Commercial/Industrial Market Trend Analysis

The assessor did apply market trend adjustments to the commercial dataset. The commercial/industrial sales were analyzed, examining the sale ratios across the 60 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.996	.009		116.306	.000
	SalePeriod	-.001	.000	-.182	-4.141	.000

a. Dependent Variable: salesratio



There was a statistically significant residual market trending present in the commercial sale ratios, although the magnitude of that trend was not significant. 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 taxable years 2018 and 2019 between sold and unsold commercial properties, stratified by subclass, to determine if both groups were valued consistently, as follows:

Report

DIFF

ABSTRIMP2	sold	N	Median	Mean
2212	UNSOLD	664	1.07	1.12
	SOLD	41	1.17	1.25
2220	UNSOLD	442	1.10	1.14
	SOLD	59	1.20	1.24
2230	UNSOLD	944	1.07	1.12
	SOLD	75	1.17	1.24
2235	UNSOLD	604	1.10	1.15
	SOLD	60	1.18	1.26
2245	UNSOLD	1678	1.13	1.16
	SOLD	215	1.19	1.22
3215	UNSOLD	120	1.10	1.10
	SOLD	8	1.15	1.20
Total	UNSOLD	4452	1.10	1.14
	SOLD	458	1.18	1.23

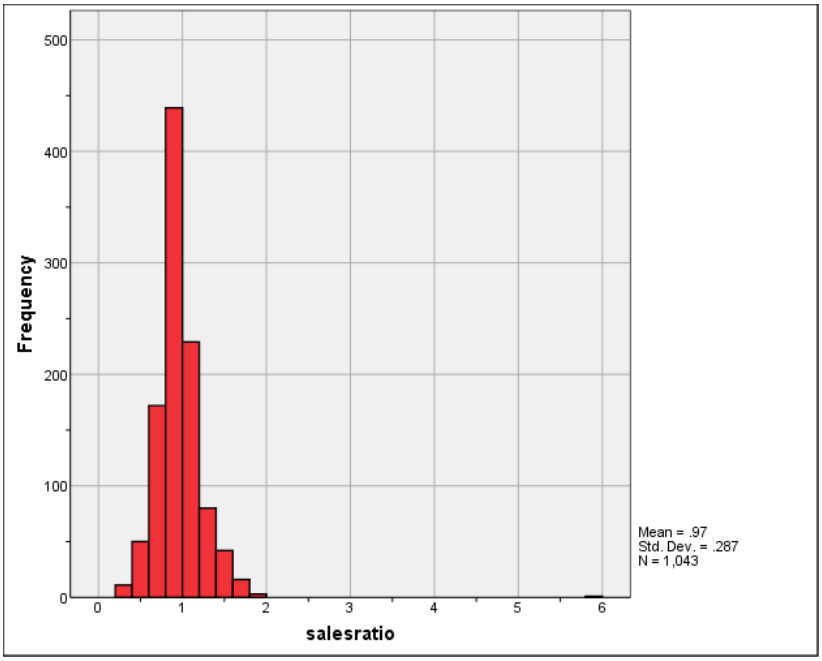
Although the magnitude overall was not significant, we did consult with the assessor's office to review the commercial valuation process. After reviewing these results, we concluded that sold and unsold commercial properties in this county were valued consistently.

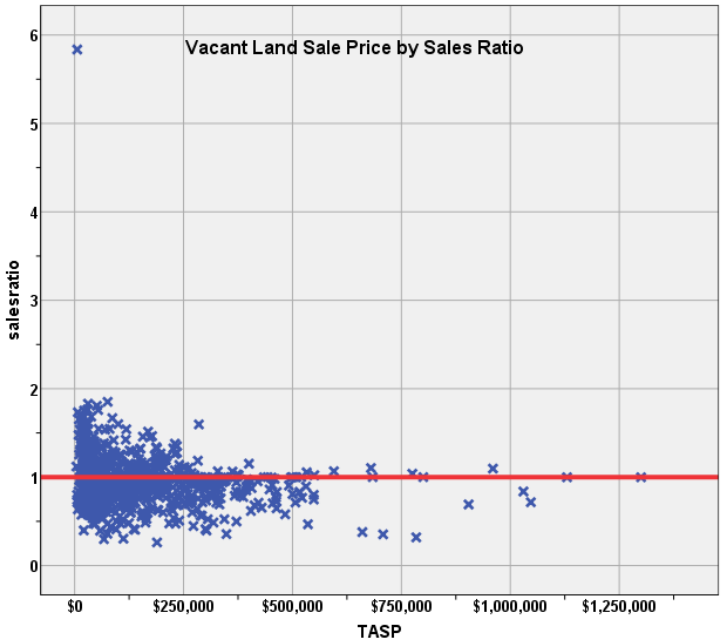
V. VACANT LAND SALE RESULTS

There were 1,043 qualified vacant land sales for the 60 month period ending June 30, 2018. The sales ratio analysis results were as follows:

Median	**0.960**
Price Related Differential	**1.063**
Coefficient of Dispersion	**18.9**

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.

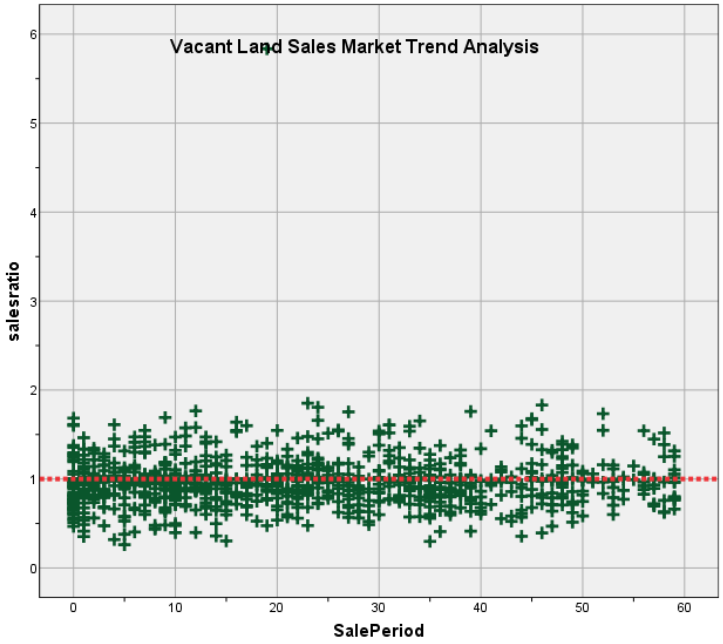
Vacant Land Market Trend Analysis

We next analyzed the vacant land dataset using the 60-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)	.958	.015		64.137	.000
	SalePeriod	.000	.001	.017	.554	.579

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 taxable years 2018 and 2019 between each group, as follows:

Report
DIFF

sold	N	Median	Mean
UNSOLD	10315	1.00	1.08
SOLD	1006	1.13	1.18

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
02523	UNSOLD	10	1.16	1.14
	SOLD	10	1.16	1.16
0272120	UNSOLD	86	1.16	1.15
	SOLD	32	1.16	1.15
0272130	UNSOLD	48	1.40	1.34
	SOLD	15	1.40	1.34
0272150	UNSOLD	51	1.00	1.00
	SOLD	14	1.00	1.00
02726	UNSOLD	41	1.25	1.21

	SOLD	16	1.20	1.21
02728	UNSOLD	37	1.17	1.34
	SOLD	18	1.17	1.30
0327120	UNSOLD	94	1.10	1.14
	SOLD	44	1.18	1.17
03276	UNSOLD	18	1.21	1.20
	SOLD	12	1.21	1.20
03279	UNSOLD	38	.73	.85
	SOLD	16	.73	.87
5013002000	UNSOLD	39	1.41	1.28
	SOLD	10	1.00	1.04
8312001000	UNSOLD	15	.97	.97
	SOLD	10	.97	.97

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

V. CONCLUSIONS

Based on this 2019 audit statistical analysis for Larimer County, residential, commercial industrial, vacant land and agricultural residential properties were found to be in compliance with state guidelines.

STATISTICAL ABSTRACT
Residential

Ratio Statistics for CURRTOT / TASP

EA	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
EA1	1.003	1.000	1.005	.999	.997	1.000	95.0%	.996	.991	1.001	1.007	.062	8.9%
EA2	1.000	.997	1.003	.998	.995	1.000	95.1%	.990	.982	.998	1.010	.065	8.7%
EA3	1.004	.974	1.034	1.000	.946	1.021	96.9%	.999	.966	1.031	1.005	.115	14.1%
EA4	1.015	.991	1.038	.997	.976	1.003	96.1%	1.000	.976	1.023	1.015	.136	18.4%

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
.967	.957	.977	.975	.969	.981	95.5%	.937	.915	.959	1.032	.072	11.3%

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
.965	.948	.983	.960	.947	.969	95.3%	.908	.890	.927	1.063	.189	29.8%

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.

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$50K to $100K	3	0.0%
	$100K to $150K	14	0.2%
	$150K to $200K	60	0.7%
	$200K to $300K	987	12.0%
	$300K to $500K	5428	65.9%
	$500K to $750K	1401	17.0%
	$750K to $1,000K	237	2.9%
	Over $1,000K	109	1.3%
Overall		8239	100.0%
Excluded		0	
Total		8239	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$50K to $100K	1.000	.994	.303	46.2%
$100K to $150K	1.223	1.003	.170	25.3%
$150K to $200K	1.064	1.002	.140	20.0%
$200K to $300K	.998	1.001	.072	10.8%
$300K to $500K	.999	1.000	.060	8.3%
$500K to $750K	.999	1.001	.074	9.7%
$750K to $1,000K	.973	1.000	.085	10.9%
Over $1,000K	.957	1.013	.093	12.4%
Overall	.998	1.008	.066	9.4%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	7473	90.7%
	1215.00	40	0.5%
	1220.00	48	0.6%
	1224.75	1	0.0%
	1225.00	8	0.1%
	1230.00	669	8.1%
Overall		8239	100.0%
Excluded		0	
Total		8239	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.999	1.005	.067	9.5%
1215.00	.974	1.007	.064	8.1%
1220.00	.992	1.008	.058	8.8%
1224.75	.934	1.000	.000	.
1225.00	.978	1.058	.053	7.8%
1230.00	.995	1.004	.058	8.2%
Overall	.998	1.008	.066	9.4%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	30	0.4%
	75 to 100	21	0.3%
	50 to 75	155	1.9%
	25 to 50	1146	13.9%
	5 to 25	3059	37.1%
	5 or Newer	3828	46.5%
Overall		8239	100.0%
Excluded		0	
Total		8239	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.982	1.006	.121	17.0%
75 to 100	1.028	.999	.115	19.8%
50 to 75	.997	1.009	.098	12.8%
25 to 50	.998	1.019	.087	12.5%
5 to 25	1.000	1.004	.066	9.2%
5 or Newer	.997	1.008	.058	8.0%
Overall	.998	1.008	.066	9.4%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	5	0.1%
	500 to 1,000 sf	367	4.5%
	1,000 to 1,500 sf	2157	26.2%
	1,500 to 2,000 sf	2870	34.8%
	2,000 to 3,000 sf	2348	28.5%
	3,000 sf or Higher	492	6.0%
Overall		8239	100.0%
Excluded		0	
Total		8239	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.910	1.008	.236	36.0%
500 to 1,000 sf	.964	1.013	.099	14.5%
1,000 to 1,500 sf	.983	1.006	.062	8.9%
1,500 to 2,000 sf	.995	1.006	.060	8.5%
2,000 to 3,000 sf	1.018	1.009	.063	8.9%
3,000 sf or Higher	1.018	1.049	.082	11.5%
Overall	.998	1.008	.066	9.4%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	6170	74.9%
	Average Plus	1497	18.2%
	Excellent	1	0.0%
	Fair	149	1.8%
	Good	341	4.1%
	Good Plus	63	0.8%
	Very Good	18	0.2%
Overall		8239	100.0%
Excluded		0	
Total		8239	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.996	1.003	.062	8.9%
Average Plus	1.009	1.013	.072	9.5%
Excellent	.797	1.000	.000	.
Fair	.973	1.035	.089	15.2%
Good	1.021	1.038	.092	12.9%
Good Plus	1.000	1.017	.079	11.2%
Very Good	1.000	1.060	.094	15.4%
Overall	.998	1.008	.066	9.4%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	A	4	0.0%
	Average	8229	99.9%
	Good	6	0.1%
Overall		8239	100.0%
Excluded		0	
Total		8239	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
A	.977	.999	.035	5.5%
Average	.998	1.008	.066	9.4%
Good	.998	.997	.038	6.6%
Overall	.998	1.008	.066	9.4%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$25K to $50K	1	0.2%
	$50K to $100K	8	1.6%
	$100K to $150K	22	4.4%
	$150K to $200K	39	7.7%
	$200K to $300K	95	18.8%
	$300K to $500K	102	20.2%
	$500K to $750K	72	14.3%
	$750K to $1,000K	37	7.3%
	Over $1,000K	128	25.4%
Overall		504	100.0%
Excluded		0	
Total		504	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$25K to $50K	.998	1.000	.000	.
$50K to $100K	.989	.998	.100	13.0%
$100K to $150K	1.026	.998	.078	10.9%
$150K to $200K	.978	.998	.088	12.0%
$200K to $300K	.980	1.001	.074	11.2%
$300K to $500K	.979	1.003	.080	13.9%
$500K to $750K	.971	1.000	.051	8.2%
$750K to $1,000K	.985	.998	.047	8.3%
Over $1,000K	.958	1.016	.069	10.5%
Overall	.975	1.032	.072	11.3%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1230.00	1	0.2%
	1712.00	3	0.6%
	1713.50	4	0.8%
	1718.50	1	0.2%
	1721.00	2	0.4%
	1737.50	1	0.2%
	1812.00	1	0.2%
	1813.80	1	0.2%
	1880.67	1	0.2%
	1890.67	1	0.2%
	1894.00	1	0.2%
	2088.86	1	0.2%
	2109.42	1	0.2%
	2161.53	1	0.2%
	2212.00	43	8.5%
	2215.00	2	0.4%
	2216.00	1	0.2%
	2216.60	1	0.2%
	2218.00	1	0.2%
	2220.00	59	11.7%
	2223.50	2	0.4%
	2227.50	3	0.6%
	2230.00	75	14.9%
	2232.50	1	0.2%
	2235.00	60	11.9%
	2240.00	3	0.6%
	2245.00	217	43.1%
	3215.00	9	1.8%
	3230.00	2	0.4%
	5749.50	1	0.2%
	5762.00	1	0.2%
	9229.00	1	0.2%
	9249.00	1	0.2%
	9279.00	1	0.2%
Overall		504	100.0%
Excluded		0	
Total		504	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1230.00	.937	1.000	.000	.
1712.00	.960	.992	.035	5.6%
1713.50	.988	.999	.017	2.7%
1718.50	1.003	1.000	.000	.
1721.00	1.029	1.000	.030	4.3%
1737.50	1.383	1.000	.000	.
1812.00	.973	1.000	.000	.
1813.80	1.003	1.000	.000	.
1880.67	1.040	1.000	.000	.
1890.67	.883	1.000	.000	.
1894.00	.943	1.000	.000	.
2088.86	.992	1.000	.000	.
2109.42	1.014	1.000	.000	.
2161.53	.956	1.000	.000	.
2212.00	.980	1.093	.073	11.3%
2215.00	.986	.993	.014	2.0%
2216.00	.937	1.000	.000	.
2216.60	.927	1.000	.000	.
2218.00	.983	1.000	.000	.
2220.00	.977	1.011	.059	9.1%
2223.50	.969	.994	.011	1.6%
2227.50	.953	1.022	.071	11.7%
2230.00	.968	1.017	.065	10.3%
2232.50	.957	1.000	.000	.
2235.00	.976	1.022	.036	6.0%
2240.00	.994	1.020	.018	3.3%
2245.00	.976	1.025	.089	13.4%
3215.00	.967	.991	.068	9.7%
3230.00	.878	1.008	.135	19.0%
5749.50	.960	1.000	.000	.
5762.00	.991	1.000	.000	.
9229.00	.788	1.000	.000	.
9249.00	1.202	1.000	.000	.
9279.00	1.152	1.000	.000	.
Overall	.975	1.032	.072	11.3%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	25	5.0%
	75 to 100	12	2.4%
	50 to 75	51	10.1%
	25 to 50	173	34.3%
	5 to 25	220	43.7%
	5 or Newer	23	4.6%
Overall		504	100.0%
Excluded		0	
Total		504	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.961	.989	.072	12.2%
75 to 100	.961	1.021	.054	7.5%
50 to 75	.994	1.002	.046	7.2%
25 to 50	.978	1.010	.059	9.3%
5 to 25	.969	1.056	.090	13.7%
5 or Newer	.973	1.011	.055	8.1%
Overall	.975	1.032	.072	11.3%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	8	1.6%
	500 to 1,000 sf	27	5.4%
	1,000 to 1,500 sf	86	17.1%
	1,500 to 2,000 sf	58	11.5%
	2,000 to 3,000 sf	76	15.1%
	3,000 sf or Higher	249	49.4%
Overall		504	100.0%
Excluded		0	
Total		504	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	1.001	1.000	.069	9.6%
500 to 1,000 sf	.967	.996	.076	9.8%
1,000 to 1,500 sf	.983	1.011	.081	10.8%
1,500 to 2,000 sf	.974	1.022	.078	12.5%
2,000 to 3,000 sf	.984	1.010	.078	11.6%
3,000 sf or Higher	.973	1.029	.064	11.2%
Overall	.975	1.032	.072	11.3%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	Average	395	78.4%
	Average Plus	47	9.3%
	Fair	10	2.0%
	Good	51	10.1%
	Good Plus	1	0.2%
Overall		504	100.0%
Excluded		0	
Total		504	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.977	1.017	.067	10.1%
Average Plus	.971	1.100	.090	17.3%
Fair	.993	.982	.038	6.0%
Good	.961	1.029	.092	13.9%
Good Plus	.988	1.000	.000	.
Overall	.975	1.032	.072	11.3%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	Average	455	90.3%
	Badly Worn	1	0.2%
	Excellent	1	0.2%
	Good	25	5.0%
	Very Good	22	4.4%
Overall		504	100.0%
Excluded		0	
Total		504	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.974	1.033	.067	10.1%
Badly Worn	1.003	1.000	.000	.
Excellent	.988	1.000	.000	.
Good	.983	1.021	.155	24.9%
Very Good	.982	1.012	.075	10.8%
Overall	.975	1.032	.072	11.3%

Economic Area

Case Processing Summary

		Count	Percent
ECONAREA	EA1	228	45.2%
	EA2	230	45.6%
	EA3	45	8.9%
	EA4	1	0.2%
Overall		504	100.0%
Excluded		0	
Total		504	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
EA1	.979	1.013	.074
EA2	.961	1.045	.072
EA3	1.009	1.011	.044
EA4	.850	1.000	.000
Overall	.975	1.032	.072

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	122	11.7%
	$25K to $50K	241	23.1%
	$50K to $100K	205	19.7%
	$100K to $150K	138	13.2%
	$150K to $200K	117	11.2%
	$200K to $300K	112	10.7%
	$300K to $500K	83	8.0%
	$500K to $750K	16	1.5%
	$750K to $1,000K	5	0.5%
	Over $1,000K	4	0.4%
Overall		1043	100.0%
Excluded		0	
Total		1043	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.126	1.011	.262	46.7%
$25K to $50K	.964	1.015	.177	24.2%
$50K to $100K	.927	.999	.191	26.4%
$100K to $150K	.954	.997	.165	22.4%
$150K to $200K	.962	.998	.156	21.7%
$200K to $300K	.942	1.001	.156	21.3%
$300K to $500K	.894	.998	.140	19.2%
$500K to $750K	.864	1.008	.223	28.7%
$750K to $1,000K	1.000	.991	.225	37.8%
Over $1,000K	.918	.991	.121	15.4%
Overall	.960	1.063	.189	30.0%

Subclass

Case Processing Summary

		Count	Percent
ECONAREA	EA1	196	18.8%
	EA2	190	18.2%
	EA3	78	7.5%
	EA4	579	55.5%
Overall		1043	100.0%
Excluded		0	
Total		1043	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
EA1	.886	1.060	.183
EA2	.860	1.067	.234
EA3	.978	1.054	.166
EA4	.943	1.077	.215
Overall	.930	1.090	.208