2019
PUEBLO COUNTY
PROPERTY ASSESSMENT
STUDY

WILDROSE
APPRAISAL, INCORPORATED
Audit Division

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APPRAISAL, INCORPORATED
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.

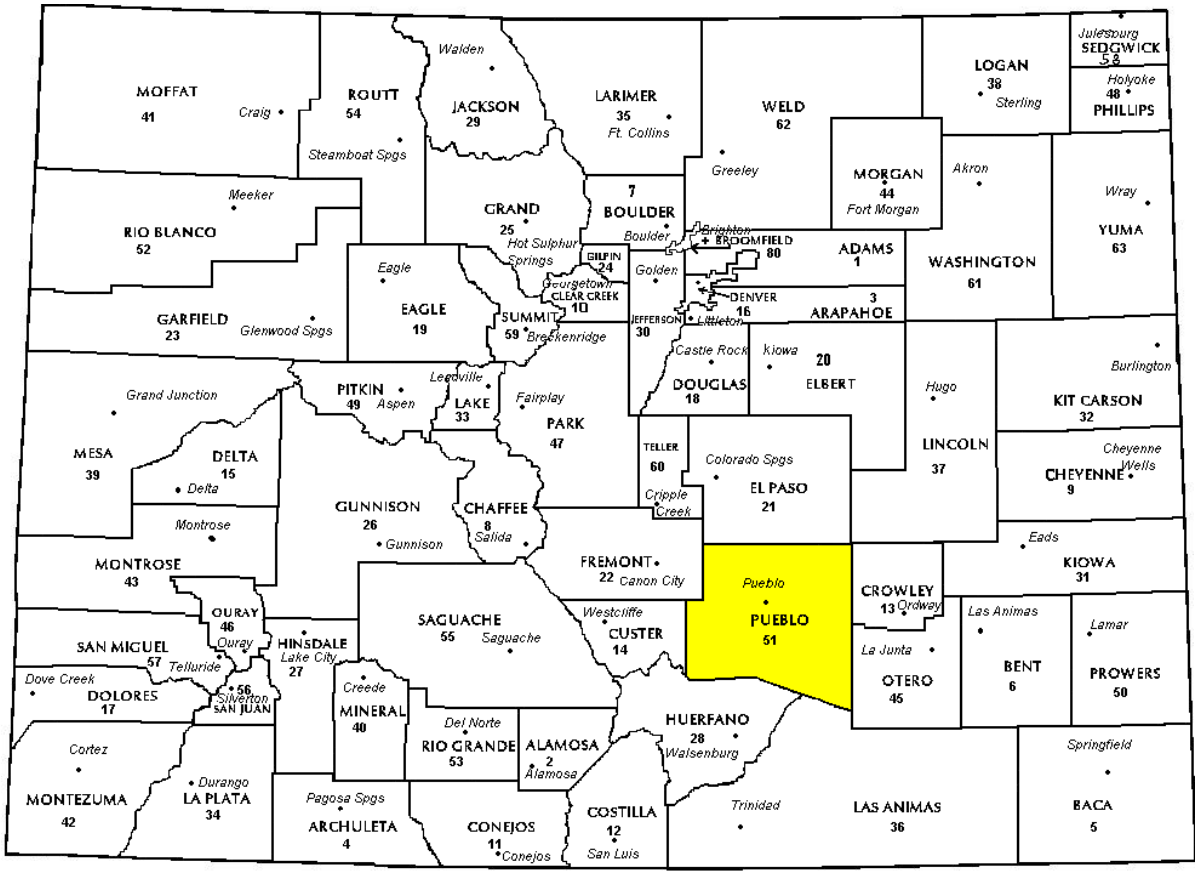
Statistical analysis is performed on vacant land, residential properties, commercial industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax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

Wildrose Audit has completed the Property Assessment Study for 2019 and is pleased to report its findings for Pueblo County in the following report.

REGIONAL/HISTORICAL SKETCH OF PUEBLO COUNTY

Regional Information

Pueblo 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

Pueblo County had an estimated population of approximately 165,123 people with 69.1 people per square mile, according to the U.S. Census Bureau's 2016 estimated census data. This represents a 3.8 percent change from April 1, 2010 to July 1, 2016.

Pueblo County, one of the seventeen original territorial counties, was established in 1861 with an area of 2,405 square miles. The county was named for its county seat, Pueblo, Spanish for 'town' or 'village.' Originally called Independence, it had been a settlement for many years, occupied at times by Spaniards, trappers, Indian traders, and Mexicans.

Pueblo is a Home Rule Municipality and is the county seat and the most populous city of Pueblo County. It is situated at the confluence of the Arkansas River and Fountain Creek. The area is considered to be semi-arid with approximately 14 inches of precipitation annually; however with its location in the "banana belt," Pueblo tends to get less snow than the other major cities in Colorado. Pueblo is one of the largest steel-producing cities in the United States. Because of this, Pueblo is referred to as the "Steel City." Many consider Pueblo to be the economic hub of south eastern Colorado. Due to this some people call Pueblo "Colorado's second city" even though Pueblo is the state's ninth most populous city. It is now home to a number of electronics and aviation companies. The Historic Arkansas River Project (HARP) is a beautiful river walk that graces the historic Union Avenue district. It shows the history of the Pueblo Flood.

Pueblo is also the home to Colorado's largest single event, the Colorado State Fair and the largest parade, the state fair parade. Pueblo also hosts an annual Chili Festival and the Wild West Fest. *(www.Wikipedia.org, William Bright, Colorado Place Names, 3rd Edition, Johnson Books, 2004, p. 143)*

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 Pueblo County are:

Pueblo County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	56	0.966	1.015	13.7	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	2,920	0.953	1.005	8.5	Compliant
Vacant Land	750	0.969	1.103	20.9	Compliant

After applying the above described methodologies, it is concluded from the sales ratios that Pueblo 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 Pueblo County has complied with the statutory requirements to analyze the effects of time on value in their county. Pueblo 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

Pueblo 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

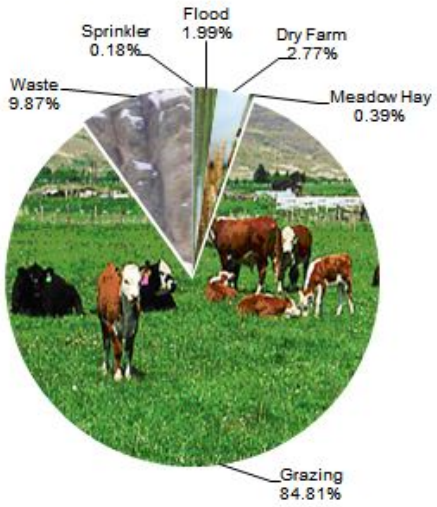
After applying the above described methodologies, it is concluded that Pueblo County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

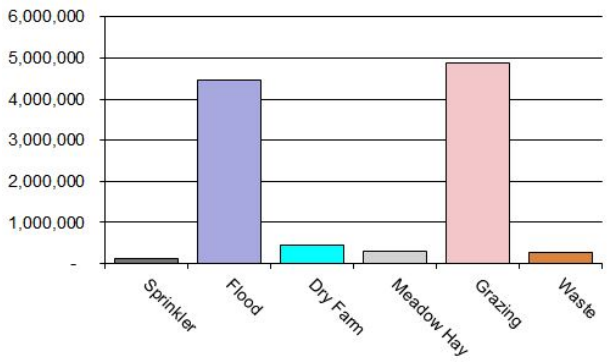
None

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:

Pueblo County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4107	Sprinkler	2,055	65.73	135,081	137,631	0.98
4117	Flood	23,306	191.63	4,466,041	4,551,867	0.98
4127	Dry Farm	32,407	13.97	452,830	456,625	0.99
4137	Meadow Hay	4,607	62.46	287,767	287,767	1.00
4147	Grazing	993,462	4.92	4,887,216	4,887,216	1.00
4167	Waste	115,567	2.39	275,721	275,721	1.00
Total/Avg		**1,171,404**	**8.97**	**10,504,656**	**10,596,827**	**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

Pueblo 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

Pueblo 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
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Written Correspondence other than Questionnaire
- Personal Knowledge of Occupants at Assessment Date

Pueblo 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.:

- Values as 1-acre site

Pueblo 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 Pueblo County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 93 sales listed as unqualified.

All but one of the sales selected in the sample gave reasons that were clear and supportable. One sale had insufficient reason for disqualification.

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 Pueblo County:

0100 Residential Lots
0200 Commercial Lots
2112 Merchandising
2130 Special Purpose
2230 Special Purpose
3112 Contract/Service
3115 Manufacturing/Processing
3212 Contract/Service
3215 Manufacturing/Processing

Conclusions

Pueblo County appears to be doing a good job of verifying their sales.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

Pueblo County has submitted a written narrative describing the economic areas that make up the county's market areas. Pueblo 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 Pueblo 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

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2019 in Pueblo 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

Pueblo 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.

Pueblo 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

Pueblo 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

Pueblo 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.

Pueblo 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.

Pueblo 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
- Same business type or use
- Non-filing Accounts - Best Information Available
- Accounts close to the $7,700 actual value exemption status
- Accounts protested with substantial disagreement

Pueblo 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

Pueblo 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

Harry J. Fuller, *Audit Project Manager*

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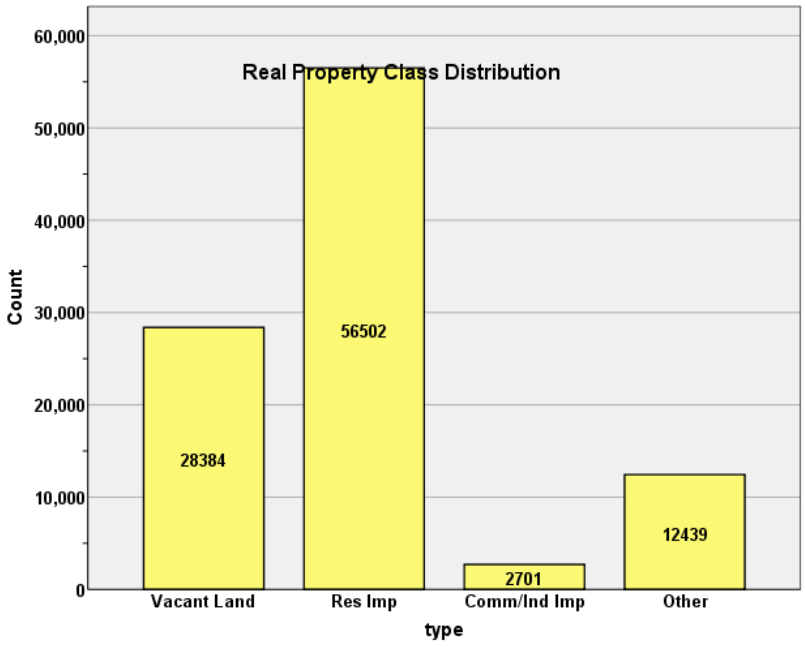
STATISTICAL APPENDIX

STATISTICAL COMPLIANCE REPORT
FOR PUEBLO COUNTY
2019

I. OVERVIEW

Pueblo County is located along the southern portion of Colorado's Front Range urban corridor. The county had a total of 100,026 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 82.6% of all vacant land parcels.

For residential improved properties, single family properties accounted for 95.1% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 2.7% 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:

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

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

II. DATA FILES

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

III. RESIDENTIAL SALES RESULTS

There were 2,943 qualified residential sales that occurred in the 18-month sale period ending June 30, 2018. We trimmed 23 sales using IAAO standards, resulting in a final count of 2,920 sales. The sales ratio analysis results were as follows:

Median	**0.953**
Price Related Differential	**1.005**
Coefficient of Dispersion	**8.5**

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	1.00	117	4.0%
	2.00	258	8.8%
	3.00	373	12.8%
	4.00	108	3.7%
	5.00	274	9.4%
	6.00	236	8.1%
	7.00	292	10.0%
	8.00	617	21.1%
	9.00	238	8.2%
	10.00	83	2.8%
	11.00	61	2.1%
	12.00	81	2.8%
	13.00	181	6.2%
Overall		2919	100.0%
Excluded		1	
Total		2920	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1.00	.984	1.030	.148
2.00	.959	1.002	.092
3.00	.947	.999	.075
4.00	.976	1.007	.107
5.00	.957	1.011	.100
6.00	.954	1.000	.071
7.00	.952	1.001	.076
8.00	.948	.996	.067
9.00	.960	1.020	.124
10.00	.955	1.001	.073
11.00	.959	1.031	.064
12.00	.949	1.018	.105
13.00	.945	.994	.057
Overall	.953	1.005	.085

Neighborhoods with at least 20 sales

Ratio Statistics for CURRTOT / TASP

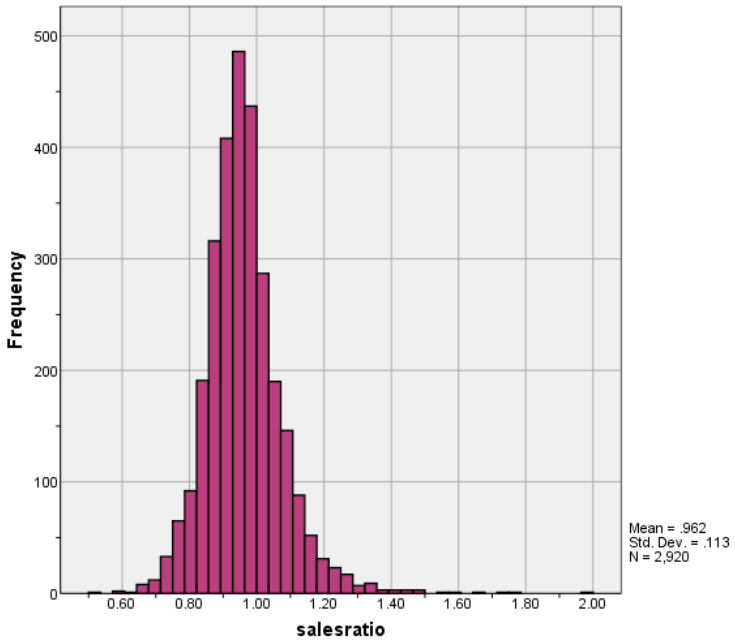
Group	Median	Price Related Differential	Coefficient of Dispersion
10	1.027	1.020	.144
11	**.927**	**1.025**	**.125**
20	.959	.998	.093
25	.959	1.003	.078
30	.961	1.001	.089
35	.957	.997	.063
36	**.927**	**.989**	**.089**
40	**.926**	**.997**	**.067**
60	.948	.999	.095
63	.946	1.003	.082
70	**.936**	**1.029**	**.122**
86	.964	1.010	.123
95	.940	1.003	.088
110	.979	1.010	.108
120	.966	1.004	.084
126	.948	.996	.067
127	.957	1.000	.059
128	.960	.999	.070
129	.950	.997	.050
133	.996	1.005	.126
135	.992	1.002	.096
148	**.943**	**.997**	**.102**
150	.956	1.001	.061
151	.948	.996	.086
153	.947	1.003	.078
159	.947	.998	.071
162	.945	.994	.057
166	.959	.993	.074
167	.992	1.001	.104
169	**.935**	**.993**	**.074**
171	.974	.992	.078
172	**.925**	**1.000**	**.057**
174	.951	.993	.063

177	**.924**	**1.000**	**.048**
178	.958	.996	.052
180	.945	.996	.056
187	**.936**	**.992**	**.067**
191	.964	1.006	.110
200	**.942**	**1.006**	**.138**
204	1.002	1.100	.209
210	.957	1.006	.098
Overall	.955	1.004	.088

The above results when stratified by economic area had several economic areas with low median sales ratios although after rounding to two digits they were in compliance at the lower SBOE threshold of 0.95 for the median sales ratio. The COD results were all in compliance.

In terms of residential neighborhoods with at least 20 sales, there were 9 out of 42 neighborhoods with median sales ratios less than the 0.95 lower threshold, even after rounding (red highlighted). The Audit has met with the assessor to discuss these outlier neighborhoods.

The following graphs describe further the sales ratio distribution for these properties:



Residential Market Trend Analysis

We next analyzed the residential dataset for any residual market trending using the 18-month sale period and stratified 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)	.929	.041		22.504	.000
		SalePeriod	.009	.004	.223	2.453	.016
2.00	1	(Constant)	.978	.014		67.897	.000
		SalePeriod	-.001	.001	-.050	-.793	.428
3.00	1	(Constant)	.965	.011		90.089	.000
		SalePeriod	-.001	.001	-.033	-.630	.529
4.00	1	(Constant)	1.049	.033		31.940	.000
		SalePeriod	-.006	.003	-.191	-2.008	.047
5.00	1	(Constant)	.973	.020		49.039	.000
		SalePeriod	-.002	.002	-.055	-.901	.369
6.00	1	(Constant)	.983	.014		70.436	.000
		SalePeriod	-.002	.001	-.104	-1.592	.113
7.00	1	(Constant)	.944	.014		68.152	.000
		SalePeriod	.001	.001	.053	.899	.369
8.00	1	(Constant)	.953	.007		128.330	.000
		SalePeriod	-5.643E-5	.001	-.003	-.078	.938
9.00	1	(Constant)	.978	.026		37.664	.000
		SalePeriod	3.209E-5	.002	.001	.013	.990
10.00	1	(Constant)	.928	.019		49.331	.000
		SalePeriod	.003	.002	.195	1.790	.077

11.00	1	(Constant)	.937	.024		38.930	.000
		SalePeriod	.001	.002	.046	.350	.727
12.00	1	(Constant)	.959	.033		29.382	.000
		SalePeriod	-.002	.003	-.067	-.598	.551
13.00	1	(Constant)	.942	.011		89.349	.000
		SalePeriod	.001	.001	.058	.779	.437

a. Dependent Variable: salesratio

There were no economic areas with statistically significant trends; 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, as follows:

Report

VALSF

sold	N	Median	Mean
UNSOLD	53440	$118	$118
SOLD	2920	$134	$136

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of VALSF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .01.

Given that there was a statistically significant difference using the non-parametric Mann Whitney U test, we next compared the percent change in actual value between taxable years 2018 and 2019 for sold and unsold residential properties. The data was analyzed both as a whole and broken down by economic area, as follows:

Report

DIFF

sold	N	Median	Mean
UNSOLD	53041	1.18	1.19
SOLD	2919	1.16	1.18

Report
DIFF

ECONAREA	sold	N	Median	Mean
1.00	UNSOLD	4466	1.31	1.32
	SOLD	117	1.28	1.31
2.00	UNSOLD	3802	1.22	1.20
	SOLD	258	1.23	1.21
3.00	UNSOLD	4919	1.13	1.15
	SOLD	373	1.12	1.14
4.00	UNSOLD	3343	1.23	1.24
	SOLD	108	1.22	1.24
5.00	UNSOLD	5483	1.19	1.20
	SOLD	274	1.19	1.19
6.00	UNSOLD	4019	1.17	1.16
	SOLD	236	1.14	1.16
7.00	UNSOLD	5171	1.18	1.17
	SOLD	292	1.18	1.17
8.00	UNSOLD	7778	1.14	1.16
	SOLD	617	1.15	1.16
9.00	UNSOLD	7441	1.18	1.20
	SOLD	237	1.19	1.21
10.00	UNSOLD	882	1.08	1.09
	SOLD	83	1.10	1.12
11.00	UNSOLD	696	1.12	1.15
	SOLD	61	1.16	1.18
12.00	UNSOLD	2319	1.26	1.27
	SOLD	81	1.21	1.24
13.00	UNSOLD	1966	1.14	1.15
	SOLD	181	1.14	1.15

We also stratified this analysis by residential neighborhoods with at least 20 sales, as follows:

Report
DIFF

NBHD	sold	N	Median	Mean
10	UNSOLD	3070	1.31	1.33
	SOLD	77	1.29	1.33
11	UNSOLD	383	1.12	1.13
	SOLD	24	1.12	1.13
20	UNSOLD	2241	1.24	1.25
	SOLD	149	1.24	1.25
25	UNSOLD	393	1.15	1.15
	SOLD	32	1.15	1.17
30	UNSOLD	592	1.14	1.15
	SOLD	40	1.15	1.15
35	UNSOLD	968	1.11	1.12
	SOLD	118	1.11	1.12
36	UNSOLD	206	1.09	1.09
	SOLD	35	1.09	1.09
40	UNSOLD	588	1.15	1.15
	SOLD	35	1.15	1.16
60	UNSOLD	1621	1.14	1.17
	SOLD	85	1.14	1.15
63	UNSOLD	880	1.19	1.22
	SOLD	55	1.19	1.23

70	UNSOLD	1476	1.26	1.28
	SOLD	48	1.21	1.24
86	UNSOLD	1740	1.21	1.23
	SOLD	52	1.21	1.23
95	UNSOLD	1014	1.10	1.12
	SOLD	54	1.08	1.10
110	UNSOLD	2338	1.21	1.23
	SOLD	116	1.20	1.22
120	UNSOLD	1315	1.19	1.20
	SOLD	88	1.19	1.20
126	UNSOLD	436	1.13	1.14
	SOLD	36	1.13	1.14
127	UNSOLD	635	1.11	1.11
	SOLD	37	1.12	1.12
128	UNSOLD	1096	1.20	1.20
	SOLD	61	1.20	1.20
129	UNSOLD	471	1.08	1.10
	SOLD	33	1.09	1.08
133	UNSOLD	896	1.21	1.24
	SOLD	39	1.22	1.23
135	UNSOLD	874	1.27	1.30
	SOLD	29	1.29	1.29
148	UNSOLD	395	1.14	1.15
	SOLD	24	1.14	1.16
150	UNSOLD	1127	1.20	1.21
	SOLD	41	1.21	1.22
151	UNSOLD	377	1.14	1.14
	SOLD	36	1.14	1.15
153	UNSOLD	470	1.16	1.17
	SOLD	30	1.17	1.17
159	UNSOLD	487	1.04	1.05
	SOLD	24	1.05	1.06
162	UNSOLD	1966	1.14	1.15
	SOLD	181	1.14	1.15
166	UNSOLD	1262	1.17	1.18
	SOLD	105	1.17	1.19
167	UNSOLD	542	1.34	1.36
	SOLD	31	1.34	1.36
169	UNSOLD	351	1.09	1.11
	SOLD	28	1.11	1.12
171	UNSOLD	492	1.18	1.18
	SOLD	32	1.18	1.18
172	UNSOLD	309	1.11	1.11
	SOLD	34	1.11	1.12
174	UNSOLD	542	1.14	1.15
	SOLD	45	1.14	1.15
177	UNSOLD	349	1.13	1.14
	SOLD	27	1.13	1.14
178	UNSOLD	733	1.15	1.16
	SOLD	75	1.16	1.16
180	UNSOLD	1235	1.12	1.13
	SOLD	106	1.12	1.13
187	UNSOLD	340	1.06	1.08
	SOLD	33	1.07	1.07
191	UNSOLD	2537	1.17	1.19
	SOLD	80	1.18	1.20
200	UNSOLD	1282	1.11	1.14

	SOLD	42	1.10	1.11
204	UNSOLD	1497	1.25	1.27
	SOLD	29	1.31	1.31
210	UNSOLD	785	1.21	1.26
	SOLD	55	1.21	1.25

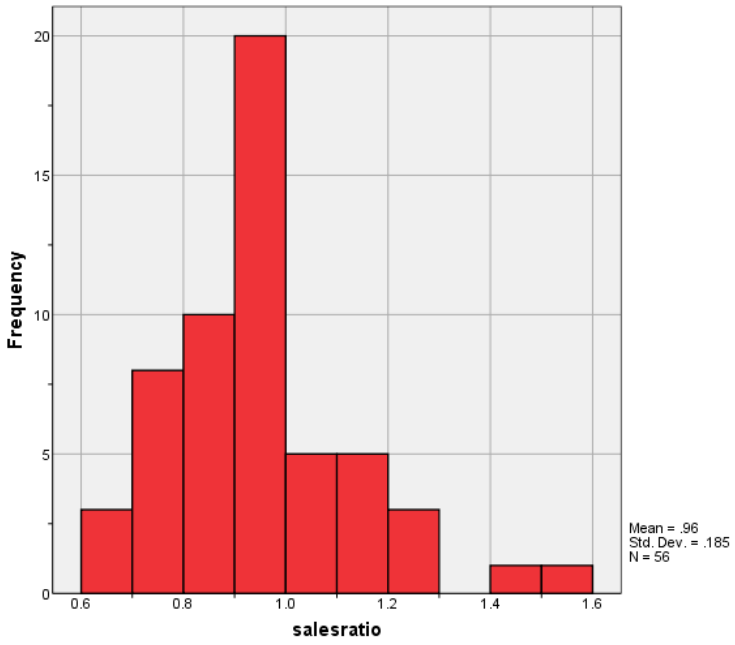
Based on the above analyses, we concluded that there was no evidence of sold properties being valued differently from unsold properties.

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 56 qualified commercial/industrial sales for the 18 month period ending June 30, 2018. The sales ratio analysis was analyzed as follows:

Median	**0.966**
Price Related Differential	**1.015**
Coefficient of Dispersion	**13.7**

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



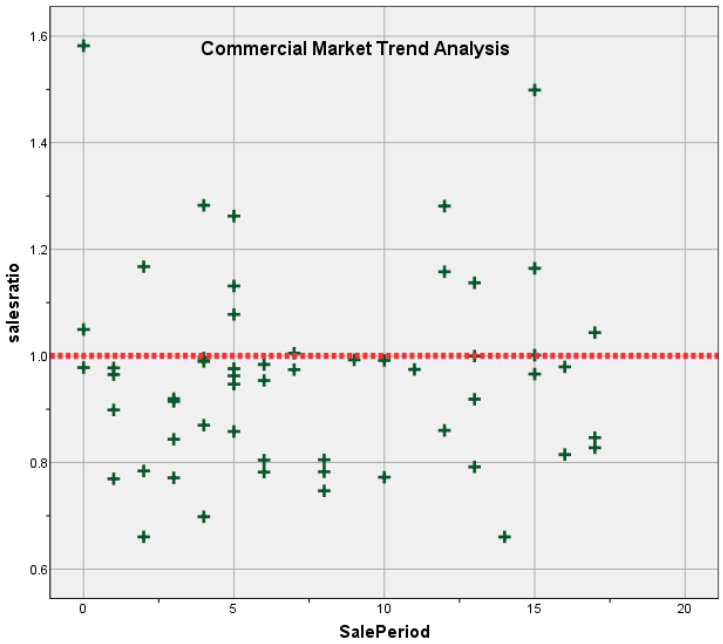
Commercial/Industrial Market Trend Analysis

The commercial/industrial sales were analyzed, examining the sale ratios across the 18 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.956	.044		21.753	.000
	SalePeriod	.001	.005	.020	.147	.884

a. Dependent Variable: salesratio



There was no residual market trending present in the commercial sale ratios. We concluded that the assessor has adequately considered market trending adjustments as part of the commercial/industrial valuation.

Sold/Unsold Analysis

We compared the 2019 median and mean actual value per square foot between sold and unsold commercial/industrial properties to determine if sold and unsold properties were valued consistently, as follows:

Report
VALSF

sold	N	Median	Mean
UNSOLD	2487	$22	$32
SOLD	56	$31	$33

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of VALSF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.003	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .01.

Report

DIFF

sold	N	Median	Mean
UNSOLD	2635	1.02	1.10
SOLD	56	1.06	1.26

Report

DIFF

ABSTRIMP	sold	N	Median	Mean
2212.00	0	435	1.03	1.10
	1	11	1.09	1.26
2220.00	0	213	1.00	1.05
	1	5	1.24	1.22
2225.00	0	67	1.04	1.16
	1	5	1.01	1.06
2230.00	0	1007	1.02	1.13
	1	19	1.39	1.39
2235.00	0	150	1.03	1.01
	1	6	1.04	1.12
2245.00	0	111	1.00	1.01
	1	5	1.06	1.14
3212.00	0	188	1.01	1.01
	1	5	1.05	1.34

Report
VALSF

ABSTRIMP	sold	N	Median	Mean
2212.00	UNSOLD	436	$22	$27
	SOLD	11	$20	$25
2220.00	UNSOLD	214	$29	$33
	SOLD	5	$38	$38
2225.00	UNSOLD	67	$19	$25
	SOLD	5	$37	$29
2230.00	UNSOLD	1009	$25	$41
	SOLD	19	$34	$38
2235.00	UNSOLD	150	$11	$13
	SOLD	6	$18	$17
2245.00	UNSOLD	111	$48	$49
	SOLD	5	$52	$57
3212.00	UNSOLD	189	$13	$15
	SOLD	5	$18	$20

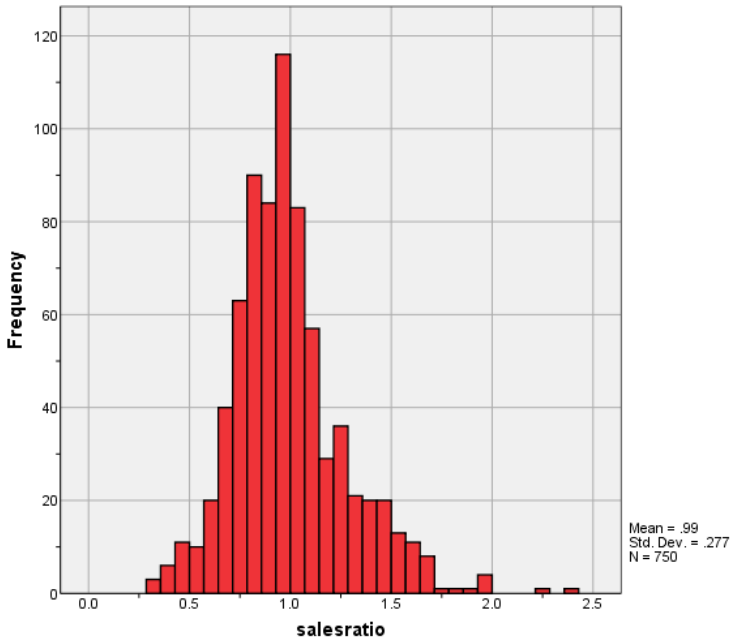
Based on the above analysis, while there was some differences noted between sold and unsold commercial properties at the subclass level, the differences were less when compared to the other comparison test. The above results indicated sold and unsold commercial/industrial properties were valued consistently.

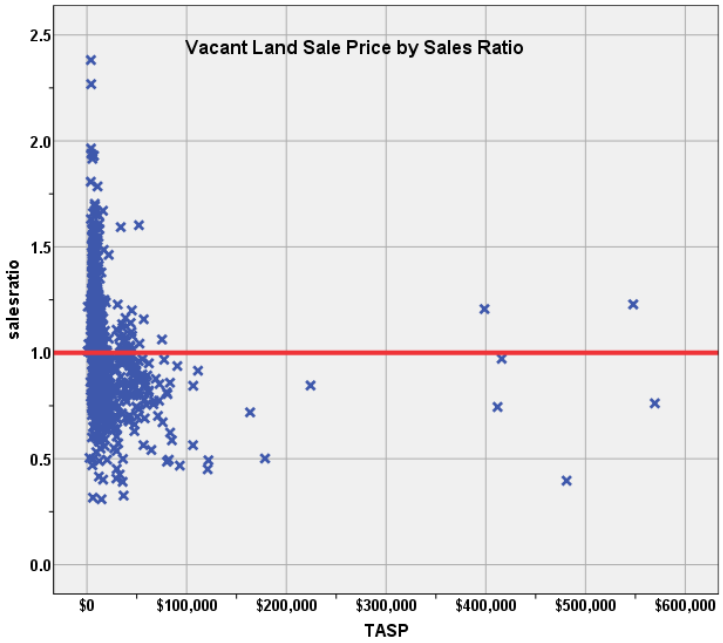
V. VACANT LAND SALE RESULTS

There were 750 qualified vacant land sales for the 18 month period ending June 30, 2018. The sales ratio analysis was analyzed as follows:

Median	**0.969**
Price Related Differential	**1.103**
Coefficient of Dispersion	**20.9**

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 all of 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 were no price related differential issues. No sales were trimmed.

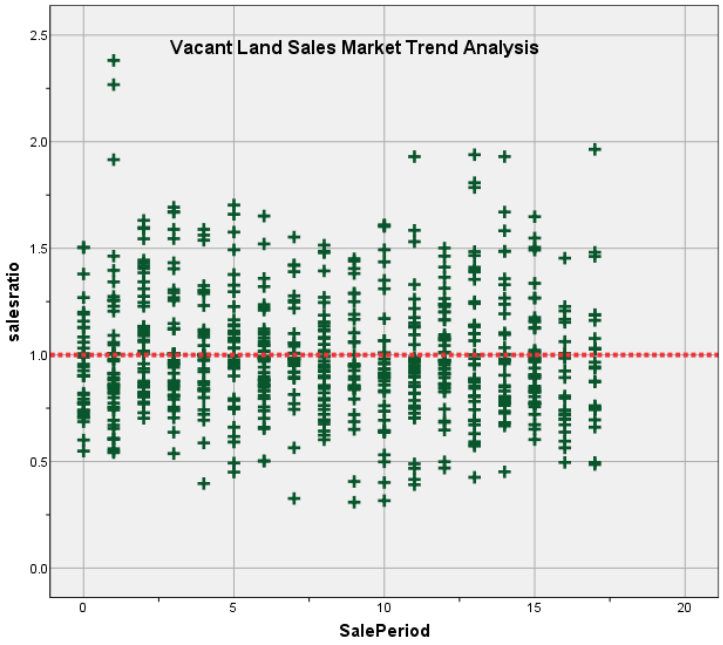
Vacant Land Market Trend Analysis

We next analyzed the vacant land dataset using the 18-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)	1.014	.019		53.726	.000
	SalePeriod	-.003	.002	-.052	-1.430	.153

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 2018 and 2019 between each group, as follows:

Report

DIFF

sold	N	Median	Mean
UNSOLD	27920	1.00	1.15
SOLD	750	1.17	1.27

We also performed this comparison analysis by subdivision. The following table indicates that sold and unsold properties were valued in a similar manner for subdivisions with at least 10 sales:

Report

DIFF

SUBDIVNO	sold	N	Median	Mean
480	UNSOLD	6	1.10	1.09
	SOLD	24	1.17	1.20
821	UNSOLD	142	1.00	1.00
	SOLD	6	1.00	1.00
824	UNSOLD	125	1.36	1.36
	SOLD	8	1.36	1.36
1043	UNSOLD	103	1.45	1.45
	SOLD	10	1.45	1.45
1044	UNSOLD	56	1.63	1.67
	SOLD	6	1.63	1.63
1045	UNSOLD	104	1.00	.93
	SOLD	6	.75	.80
1046	UNSOLD	193	1.18	1.19
	SOLD	10	1.18	1.22
1048	UNSOLD	236	1.80	1.75
	SOLD	38	1.80	1.76
1051	UNSOLD	128	2.00	1.89
	SOLD	23	2.00	1.88
1052	UNSOLD	81	1.82	1.76
	SOLD	9	1.82	1.76
1054	UNSOLD	130	1.55	1.63
	SOLD	14	1.55	1.64
1057	UNSOLD	60	1.13	1.10
	SOLD	7	1.13	1.11
1059	UNSOLD	37	.90	1.20
	SOLD	6	.90	1.02
1064	UNSOLD	324	1.29	1.30
	SOLD	30	1.29	1.31
1066	UNSOLD	115	1.00	1.00
	SOLD	9	1.00	1.00
1067	UNSOLD	159	2.00	1.67
	SOLD	14	1.33	1.62
1070	UNSOLD	58	1.20	1.20
	SOLD	14	1.20	1.20
1071	UNSOLD	104	1.00	1.00
	SOLD	7	1.00	1.00
1072	UNSOLD	73	1.00	1.02
	SOLD	12	1.00	1.03
1073	UNSOLD	87	1.20	1.19
	SOLD	21	1.20	1.26
1074	UNSOLD	28	1.50	1.31
	SOLD	13	1.50	1.29
1075	UNSOLD	68	1.65	1.60
	SOLD	15	1.65	1.65
1077	UNSOLD	34	1.15	1.15
	SOLD	5	1.31	1.31
1078	UNSOLD	37	1.00	1.00
	SOLD	6	1.00	1.00
1079	UNSOLD	38	1.23	1.19
	SOLD	8	1.23	1.23
1082	UNSOLD	38	1.59	1.37
	SOLD	7	1.00	1.17
1085	UNSOLD	70	1.00	1.00
	SOLD	5	1.00	1.00

1096	UNSOLD	93	1.56	1.67
	SOLD	5	1.56	1.62
1102	UNSOLD	27	1.07	1.05
	SOLD	5	1.07	1.04
1104	UNSOLD	105	1.11	1.11
	SOLD	9	1.11	1.11
1106	UNSOLD	20	1.35	1.34
	SOLD	12	1.35	1.32
1107	UNSOLD	24	1.00	1.00
	SOLD	6	1.00	1.00
1110	UNSOLD	61	1.00	1.00
	SOLD	5	1.00	1.00
1111	UNSOLD	15	1.44	1.44
	SOLD	5	1.44	1.44
1118	UNSOLD	45	1.00	1.14
	SOLD	5	1.20	1.15
1132	UNSOLD	38	1.00	1.00
	SOLD	5	1.00	1.00
1135	UNSOLD	57	1.00	1.00
	SOLD	5	1.00	.99
1141	UNSOLD	283	1.58	1.52
	SOLD	29	1.58	1.51
1142	UNSOLD	155	1.82	1.65
	SOLD	9	1.82	1.57
1143	UNSOLD	249	1.82	1.80
	SOLD	19	1.82	1.78
1144	UNSOLD	178	1.07	1.03
	SOLD	7	1.00	1.02
1164	UNSOLD	119	1.00	1.00
	SOLD	6	1.00	1.00
1211	UNSOLD	55	1.00	1.08
	SOLD	5	1.60	1.60
2694	UNSOLD	67	1.00	1.02
	SOLD	29	1.05	1.07
2826	UNSOLD	19	1.00	1.00
	SOLD	6	1.00	1.00
2915	UNSOLD	10	1.00	1.00
	SOLD	7	1.00	1.00
2957	UNSOLD	122	1.00	1.00
	SOLD	7	1.00	1.00
3049	UNSOLD	4	1.07	1.08
	SOLD	8	1.35	1.34
3178	UNSOLD	65	1.00	1.01
	SOLD	6	1.16	1.18
3184	UNSOLD	85	1.00	1.00
	SOLD	6	1.00	1.00

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

V. CONCLUSIONS

Based on this 2019 audit statistical analysis for Pueblo 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

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
.	.985	.	.	.985	.	.	.	.985	.	.	1.000	.000	.
1.00	1.021	.986	1.056	.984	.955	1.028	95.8%	.991	.958	1.024	1.030	.148	18.8%
2.00	.968	.955	.982	.959	.943	.976	96.0%	.966	.953	.980	1.002	.092	11.4%
3.00	.959	.949	.968	.947	.937	.956	95.1%	.960	.950	.969	.999	.075	9.7%
4.00	.990	.961	1.019	.976	.958	.996	95.7%	.983	.957	1.009	1.007	.107	15.3%
5.00	.957	.941	.972	.957	.942	.976	95.4%	.946	.932	.960	1.011	.100	13.2%
6.00	.963	.951	.975	.954	.944	.966	95.7%	.963	.951	.975	1.000	.071	9.7%
7.00	.956	.945	.967	.952	.942	.962	96.0%	.955	.943	.966	1.001	.076	9.7%
8.00	.953	.946	.959	.948	.941	.955	95.6%	.956	.949	.963	.996	.067	8.9%
9.00	.978	.956	1.001	.960	.943	.983	95.6%	.960	.941	.978	1.020	.124	17.7%
10.00	.957	.938	.977	.955	.922	.970	95.2%	.956	.935	.978	1.001	.073	9.3%
11.00	.944	.921	.967	.959	.921	.973	96.0%	.916	.874	.957	1.031	.064	9.3%
12.00	.941	.913	.969	.949	.914	.986	95.5%	.924	.899	.949	1.018	.105	13.3%
13.00	.949	.939	.959	.945	.932	.958	96.3%	.955	.944	.966	.994	.057	7.2%

The confidenc e 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
.962	.912	1.011	.966	.899	.984	95.6%	.948	.873	1.023	1.015	.137	19.2%

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
.991	.971	1.011	.969	.947	.979	95.5%	.899	.858	.940	1.103	.209	27.9%

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	$25K to $50K	24	0.8%
	$50K to $100K	297	10.2%
	$100K to $150K	583	20.0%
	$150K to $200K	647	22.2%
	$200K to $300K	1003	34.3%
	$300K to $500K	343	11.7%
	$500K to $750K	23	0.8%
Overall		2920	100.0%
Excluded		0	
Total		2920	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$25K to $50K	1.060	.997	.138	17.4%
$50K to $100K	.996	1.006	.132	18.5%
$100K to $150K	.955	1.000	.093	12.0%
$150K to $200K	.947	1.000	.079	10.9%
$200K to $300K	.945	1.000	.069	9.2%
$300K to $500K	.965	1.001	.073	10.0%
$500K to $750K	.955	.997	.062	7.9%
Overall	.953	1.005	.085	11.9%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	2858	97.9%
	1215.00	1	0.0%
	1225.00	1	0.0%
	1230.00	60	2.1%
Overall		2920	100.0%
Excluded		0	
Total		2920	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	.953	1.005	.086	12.0%
1215.00	.882	1.000	.000	.
1225.00	.985	1.000	.000	.
1230.00	.961	1.031	.064	9.4%
Overall	.953	1.005	.085	11.9%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	208	7.1%
	75 to 100	186	6.4%
	50 to 75	701	24.0%
	25 to 50	529	18.1%
	5 to 25	1232	42.2%
	5 or Newer	64	2.2%
Overall		2920	100.0%
Excluded		0	
Total		2920	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.980	1.030	.120	16.5%
75 to 100	.969	1.016	.111	15.9%
50 to 75	.951	1.009	.099	13.7%
25 to 50	.958	1.004	.080	10.8%
5 to 25	.948	.997	.069	9.3%
5 or Newer	.976	.997	.074	9.6%
Overall	.953	1.005	.085	11.9%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	2	0.1%
	500 to 1,000 sf	612	21.0%
	1,000 to 1,500 sf	1252	42.9%
	1,500 to 2,000 sf	717	24.6%
	2,000 to 3,000 sf	307	10.5%
	3,000 sf or Higher	30	1.0%
Overall		2920	100.0%
Excluded		0	
Total		2920	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	1.005	1.024	.092	12.9%
500 to 1,000 sf	.936	1.016	.102	14.1%
1,000 to 1,500 sf	.943	1.011	.082	11.7%
1,500 to 2,000 sf	.962	1.009	.077	11.1%
2,000 to 3,000 sf	.990	1.006	.072	9.4%
3,000 sf or Higher	1.015	1.010	.082	10.1%
Overall	.953	1.005	.085	11.9%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	.0	2	0.1%
	1.0	200	6.8%
	2.0	2555	87.5%
	3.0	85	2.9%
	9.0	78	2.7%
Overall		2920	100.0%
Excluded		0	
Total		2920	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.0	.785	1.001	.015	2.1%
1.0	.956	1.026	.134	18.6%
2.0	.952	1.004	.080	11.1%
3.0	.990	1.002	.078	10.3%
9.0	.976	1.018	.126	17.0%
Overall	.953	1.005	.085	11.9%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	.0	2	0.1%
	1.0	200	6.8%
	2.0	2555	87.5%
	3.0	85	2.9%
	9.0	78	2.7%
Overall		2920	100.0%
Excluded		0	
Total		2920	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.0	.785	1.001	.015	2.1%
1.0	.956	1.026	.134	18.6%
2.0	.952	1.004	.080	11.1%
3.0	.990	1.002	.078	10.3%
9.0	.976	1.018	.126	17.0%
Overall	.953	1.005	.085	11.9%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	1	1.8%
	$25K to $50K	3	5.4%
	$50K to $100K	9	16.1%
	$100K to $150K	6	10.7%
	$150K to $200K	9	16.1%
	$200K to $300K	13	23.2%
	$300K to $500K	6	10.7%
	$500K to $750K	5	8.9%
	$750K to $1,000K	2	3.6%
	Over $1,000K	2	3.6%
Overall		56	100.0%
Excluded		0	
Total		56	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.281	1.000	.000	.
$25K to $50K	.847	1.011	.069	11.6%
$50K to $100K	.978	.990	.138	17.2%
$100K to $150K	.943	1.013	.151	27.7%
$150K to $200K	.976	1.002	.158	19.8%
$200K to $300K	.963	1.006	.093	14.8%
$300K to $500K	.924	1.013	.221	34.6%
$500K to $750K	1.000	.997	.061	11.5%
$750K to $1,000K	1.043	1.001	.085	12.0%
Over $1,000K	.855	.968	.228	32.2%
Overall	.966	1.015	.137	19.1%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	2212.00	11	19.6%
	2220.00	5	8.9%
	2225.00	5	8.9%
	2230.00	19	33.9%
	2235.00	6	10.7%
	2245.00	5	8.9%
	3212.00	5	8.9%
Overall		56	100.0%
Excluded		0	
Total		56	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2212.00	.915	1.127	.127	16.3%
2220.00	.963	1.047	.053	9.6%
2225.00	1.000	1.002	.083	14.2%
2230.00	.975	.961	.128	19.9%
2235.00	.897	1.002	.198	26.2%
2245.00	1.262	1.014	.150	22.6%
3212.00	.919	.942	.087	11.7%
Overall	.966	1.015	.137	19.1%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	10	17.9%
	75 to 100	2	3.6%
	50 to 75	10	17.9%
	25 to 50	17	30.4%
	5 to 25	17	30.4%
Overall		56	100.0%
Excluded		0	
Total		56	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.966	1.040	.114	15.9%
75 to 100	.862	.963	.067	9.4%
50 to 75	.975	.933	.109	14.9%
25 to 50	.975	1.025	.112	15.5%
5 to 25	.963	1.081	.192	27.3%
Overall	.966	1.015	.137	19.1%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	500 to 1,000 sf	1	1.8%
	1,500 to 2,000 sf	1	1.8%
	2,000 to 3,000 sf	8	14.3%
	3,000 sf or Higher	46	82.1%
Overall		56	100.0%
Excluded		0	
Total		56	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
500 to 1,000 sf	.979	1.000	.000	.
1,500 to 2,000 sf	1.281	1.000	.000	.
2,000 to 3,000 sf	.853	.980	.072	10.4%
3,000 sf or Higher	.966	1.019	.143	20.1%
Overall	.966	1.015	.137	19.1%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	1.0	13	23.2%
	2.0	41	73.2%
	3.0	2	3.6%
Overall		56	100.0%
Excluded		0	
Total		56	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.0	.919	1.003	.149	19.2%
2.0	.965	1.052	.134	19.6%
3.0	1.090	1.017	.037	5.3%
Overall	.966	1.015	.137	19.1%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	1.0	13	23.2%
	2.0	41	73.2%
	3.0	2	3.6%
Overall		56	100.0%
Excluded		0	
Total		56	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1.0	.919	1.003	.149	19.2%
2.0	.965	1.052	.134	19.6%
3.0	1.090	1.017	.037	5.3%
Overall	.966	1.015	.137	19.1%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	538	71.7%
	$25K to $50K	153	20.4%
	$50K to $100K	45	6.0%
	$100K to $150K	5	0.7%
	$150K to $200K	2	0.3%
	$200K to $300K	1	0.1%
	$300K to $500K	4	0.5%
	$500K to $750K	2	0.3%
Overall		750	100.0%
Excluded		0	
Total		750	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	.988	1.049	.226	29.9%
$25K to $50K	.973	.993	.127	19.6%
$50K to $100K	.813	1.017	.157	23.7%
$100K to $150K	.564	1.011	.290	41.6%
$150K to $200K	.610	1.008	.178	25.2%
$200K to $300K	.846	1.000	.000	.
$300K to $500K	.858	1.025	.302	40.4%
$500K to $750K	.995	1.005	.235	33.2%
Overall	.969	1.103	.209	28.7%

Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	100.00	324	43.2%
	200.00	26	3.5%
	300.00	2	0.3%
	510.00	1	0.1%
	520.00	3	0.4%
	540.00	2	0.3%
	550.00	6	0.8%
	1106.00	1	0.1%
	1112.00	381	50.8%
	1621.00	1	0.1%
	2130.00	3	0.4%
Overall		750	100.0%
Excluded		0	
Total		750	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100.00	.979	1.100	.215	29.7%
200.00	.789	.943	.201	27.7%
300.00	.689	1.137	.273	38.6%
510.00	.469	1.000	.000	.
520.00	.537	.933	.384	59.5%
540.00	.762	.838	.454	64.3%
550.00	.768	1.139	.404	55.9%
1106.00	.762	1.000	.000	.
1112.00	.973	1.081	.193	26.5%
1621.00	.846	1.000	.000	.
2130.00	.744	.877	.331	51.2%
Overall	.969	1.103	.209	28.7%