2023
CUSTER COUNTY
PROPERTY ASSESSMENT
STUDY

EastWest
ECONOMETRICS

September 15, 2023

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

RE: Final Report for the 2023 Colorado Property Assessment Study

Dear Ms. Castle:

East West Econometrics - Audit Division is pleased to submit the Final Reports for the 2023 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 locally assessed 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.

East West Econometrics – 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
East West Econometrics – 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.

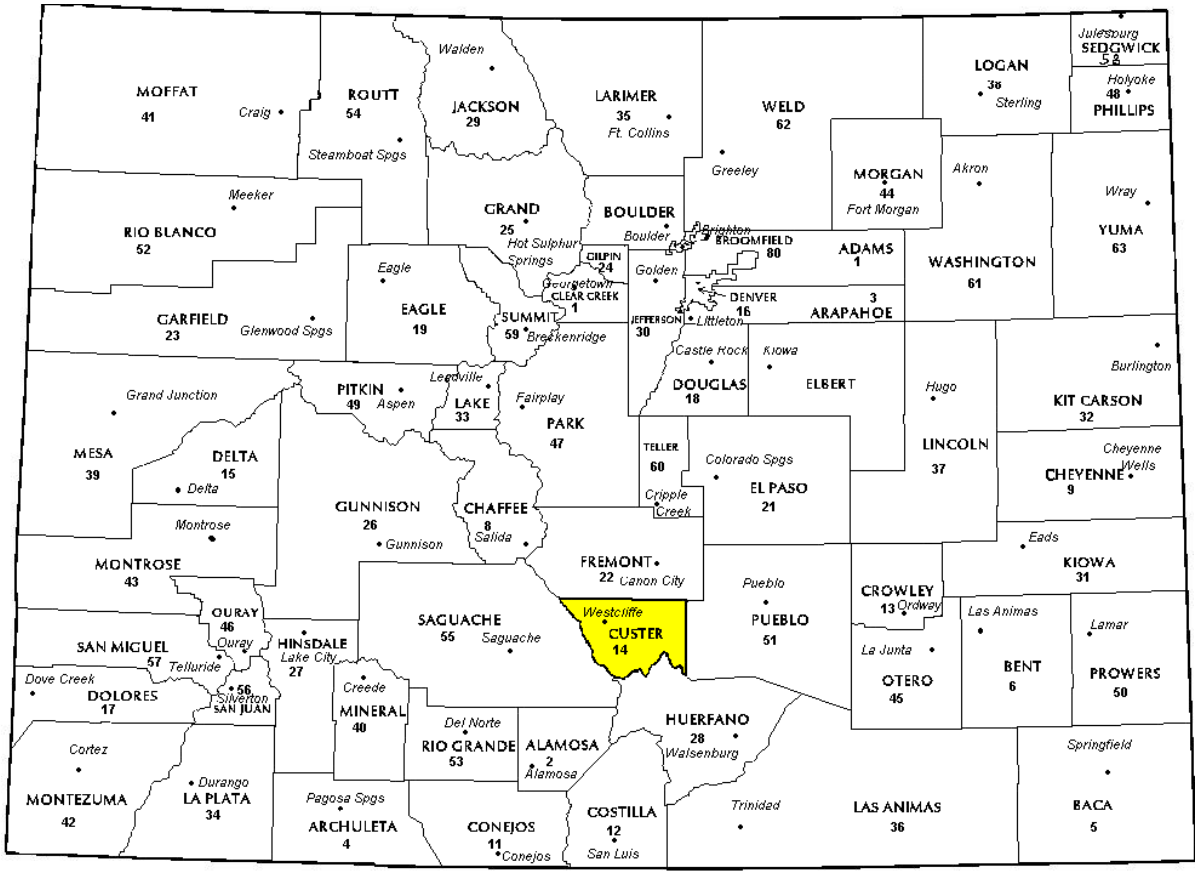
Statistical analysis is performed on vacant land, residential properties, commercial industrial properties, agricultural land, and personal property. The statistical study results are compared with State Board of Equalization compliance requirements and the manuals published by the State Property Tax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

East West Econometrics Audit has completed the Property Assessment Study for 2023 and is pleased to report its findings for Custer County in the following report.

Regional / Historical Sketch of Custer County

Regional Information

Custer County is located in the Central Mountains region of Colorado. The Central Mountains Region is in the central portion of Colorado. It extends from the northern Gilpin county boundary approximately 210 miles southeasterly to the southern boundary of Colorado, including Chaffee, Clear Creek, Custer, Fremont, Gilpin, Huerfano, Lake, Las Animas, Park, and Teller counties.



Historical Information

Custer County has approximately 738.6 square miles and an estimated population of approximately 5,068 people with 5.8 people per square mile, according to the U.S. Census Bureau's 2020 estimated census data. This represents a 19.2 percent change from April 1, 2010 to July 1, 2019.

Custer County was created by the Colorado legislature on March 9, 1877 out of the southern half of Fremont County. Originally set in Ula, the county seat moved to Rosita in 1878, and to Silver Cliff in 1886 before settling in Westcliffe in 1928. It was named in honor of Lt. Colonel George Armstrong Custer, who had died the previous year.

The county was the site of a silver rush during the 1870s. Thousands of men poured into the county during this time in the hunt for silver. Some of the notable mines include the Geyser Mine (on the north edge of the town of Silver Cliff), the Bassick Mine (near the ghost town of Querida) and the Bull Domingo (north of Silver Cliff).

During the late 1800s a railroad line was connected through the Grape Creek Canyon but was permanently closed after a few disastrous floods. The old railhouse has been turned into a historical landmark in the town of Westcliffe.

After the mines dried up, the population dropped considerably and was replaced by cattle ranchers. An extensive system of irrigation ditches were built throughout the valley. The tradition of ranching in the Wet Mountain Valley continues to this day.

The county is very rugged and would be virtually inaccessible without roads. The lowest point of the county is around 6,000 feet in elevation, but most of the county is rugged and mountainous. The county seat of Westcliffe is about 7,800 feet and along with nearby town Silver Cliff lies in the Wet Mountain Valley which sits at the base of the Sangre de Cristo Mountains. The peaks of the Sangre de Cristo Mountains to the west reach heights in excess of 14,000 feet with Crestone Peak being the highest at 14,294 feet.

A large percentage of the county is National Forest land in the Sangre de Cristo Mountains on the west side and in the Wet Mountains on the east. The only lake of size is the Deweese Reservoir in the north end of the Wet Mountain Valley.
(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, 2021 through June 30th, 2022. Property classes with less than thirty sales had the sales period extended in six month increments up to an additional forty-two months. If this extended sales period did not produce the minimum thirty qualified sales, the Audit performed supplemental appraisals to reach the minimum.

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

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

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

Conclusions

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

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

The results for Custer County are:

Custer County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	39	1.026	1.001	11.6	Compliant
Residential	401	0.999	1.009	12.5	Compliant
Vacant Land	401	0.998	1.036	12.5	Compliant

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

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

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

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

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

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

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

Conclusions

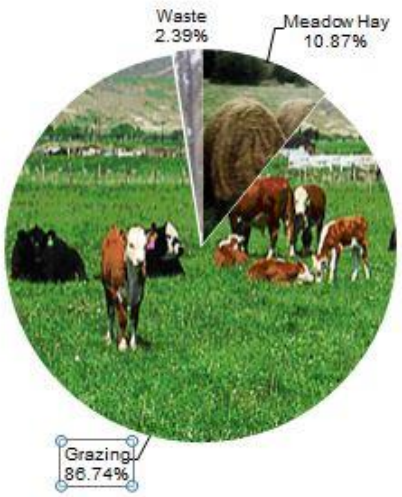
After applying the above described methodologies, it is concluded that Custer County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

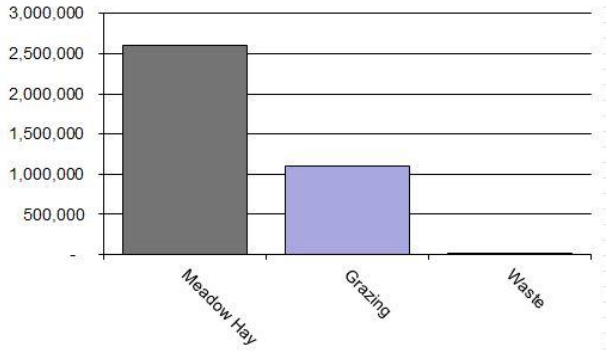
None

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:

Custer County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4137	Meadow Hay	23,148	112.54	2,605,149	2,608,311	1.00
4147	Grazing	184,661	5.94	1,096,273	1,096,273	1.00
4167	Waste	5,092	2.19	11,142	11,142	1.00
Total/Avg		**212,901**	**17.44**	**3,712,564**	**3,715,727**	**1.00**

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

Custer 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

Custer 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
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

Custer 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.:

- Property Record Card Analysis
- Questionnaires
- Field Inspections
- Phone Interviews
- In-Person Interviews with Owners/Tenants
- Personal Knowledge of Occupants at Assessment Date
- Aerial Photography/Pictometry

Custer 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.

EWE reviewed the sales verification procedures in 2023 for Custer County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically EWE selected 34 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.

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

Conclusions

Custer County appears to be doing an adequate job of verifying their sales.

Recommendations

None

Economic Area Review and Evaluation

Methodology

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

Custer County is exempt from the Vacant Land Subdivision Discount Study.

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.

Custer County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural 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

Custer 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

Custer 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.

Custer 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
- MLS Listing and/or Sold Books
- Chamber of Commerce/Economic Development Contacts
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth
- Questionnaires, Letters and/or Phone Calls to Buyer, Seller and/or Realtor

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.

Custer County submitted their personal property written audit plan and was current for the 2023 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
- Accounts with greater than 10% change
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Same business type or use

- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts close to the $52,000 actual value exemption status
- Accounts protested with substantial disagreement

Conclusions

Custer 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

East West Econometrics Auditor Staff

Harry J. Fuller, *Audit Project Manager*

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Steve Kane, *Audit Statistician*

Carl W. Ross, *Agricultural/Natural Resource Analyst*

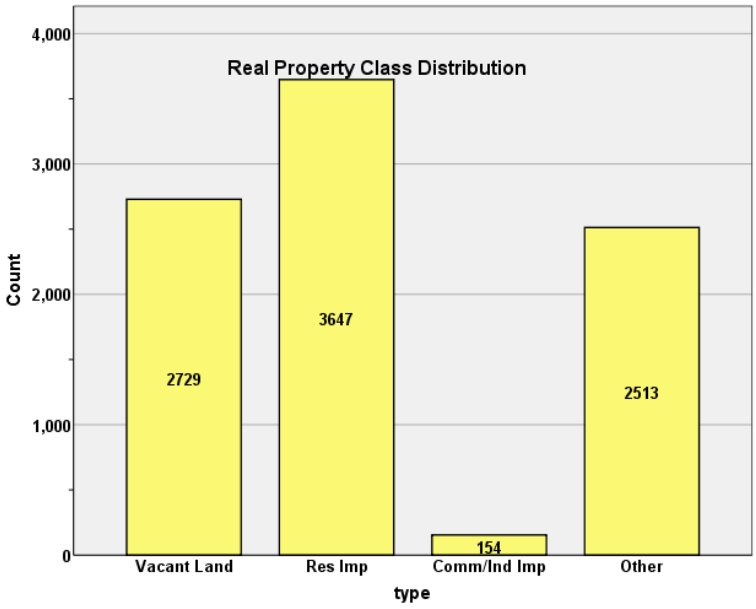
J. Andrew Rodriguez, *Field Analyst*

STATISTICAL APPENDIX

STATISTICAL COMPLIANCE REPORT
FOR CUSTER COUNTY
2023

I. OVERVIEW

Custer County is located in south central Colorado. The county has a total of 9,043 real property parcels, according to data submitted by the county assessor's office in 2023. 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 88.0% of all vacant land parcels.

For residential improved properties, single family properties accounted for nearly 91.0% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 1.7% of all such properties in this county.

II. DATA FILES

The following sales analyses were based on the requirements of the 2023 Colorado Property Assessment Study. Information was provided by the Custer Assessor's Office in April 2023. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 403 qualified residential sales in the 24-month sale period ending June 30, 2022. Two sales were trimmed using IAAO standards, resulting in a final total of 401 sales. The sales ratio analysis was analyzed as follows:

Median	**0.999**
Price Related Differential	**1.009**
Coefficient of Dispersion	**12.5**

We next stratified the sale ratio analysis by neighborhood, since all sales were located in Economic Area 1. The following are the results of this stratification analysis:

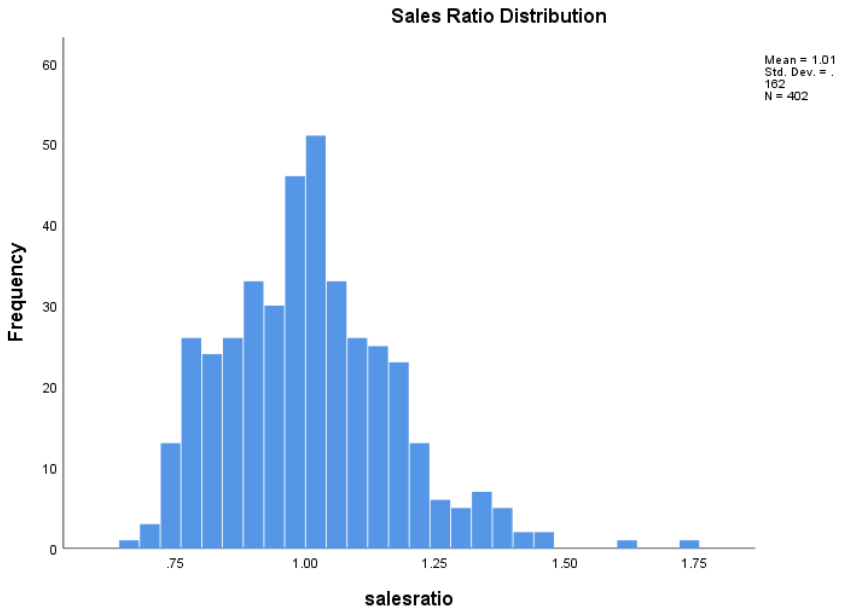
Case Processing Summary

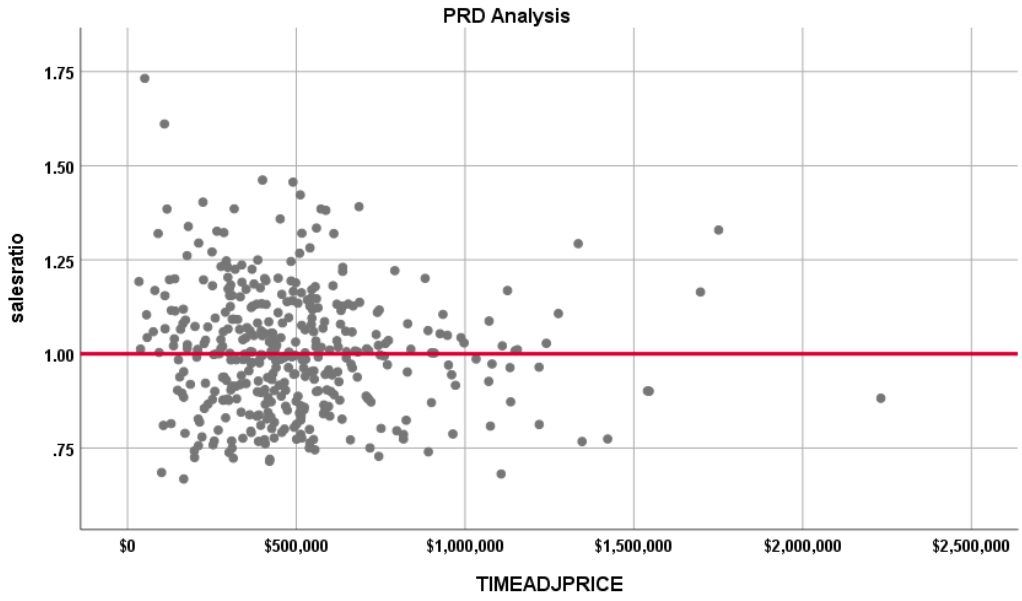
		Count	Percent
NBHD	100	74	18.4%
	200	177	44.0%
	300	114	28.4%
	400	37	9.2%
Overall		402	100.0%
Excluded		1	
Total		403	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
100	1.004	1.012	.110
200	.989	1.011	.139
300	1.003	1.002	.112
400	1.004	.998	.131
Overall	.999	1.009	.125

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





PRD Analysis

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

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.963	.016		61.555	.000
	CURRTOT	.0000000861	.000	.156	3.163	.002

a. Dependent Variable: salesratio

The slope of the line at 0.0000000861 indicates that there is virtually no slope in the regression line, which indicates that sales ratios are similar across the entire sale price array. We also stratified the sales ratio analysis by the sale price range, as follows:

Case Processing Summary

		Count	Percent
SPRec	LT $150K	23	5.7%
	$150K to $250K	35	8.7%
	$250K to $400K	107	26.6%
	$400K to $500K	73	18.2%
	$500K to $750K	112	27.9%
	$750K to $1000K	28	7.0%
	$1000K to $2000K	23	5.7%
	$2000K to $3000K	1	0.2%
Overall		402	100.0%
Excluded		1	
Total		403	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $150K	1.104	1.015	.147	21.4%
$150K to $250K	.991	1.000	.138	17.8%
$250K to $400K	1.000	1.000	.124	15.6%
$400K to $500K	.992	.997	.111	14.6%
$500K to $750K	.999	1.000	.126	15.8%
$750K to $1000K	.998	.999	.100	13.2%
$1000K to $2000K	.973	.992	.126	16.8%
$2000K to $3000K	.882	1.000	.000	.
Overall	.999	1.009	.125	16.3%

The above table indicates that the sales ratio distribution was more or less consistent across the sale price range for Custer County.

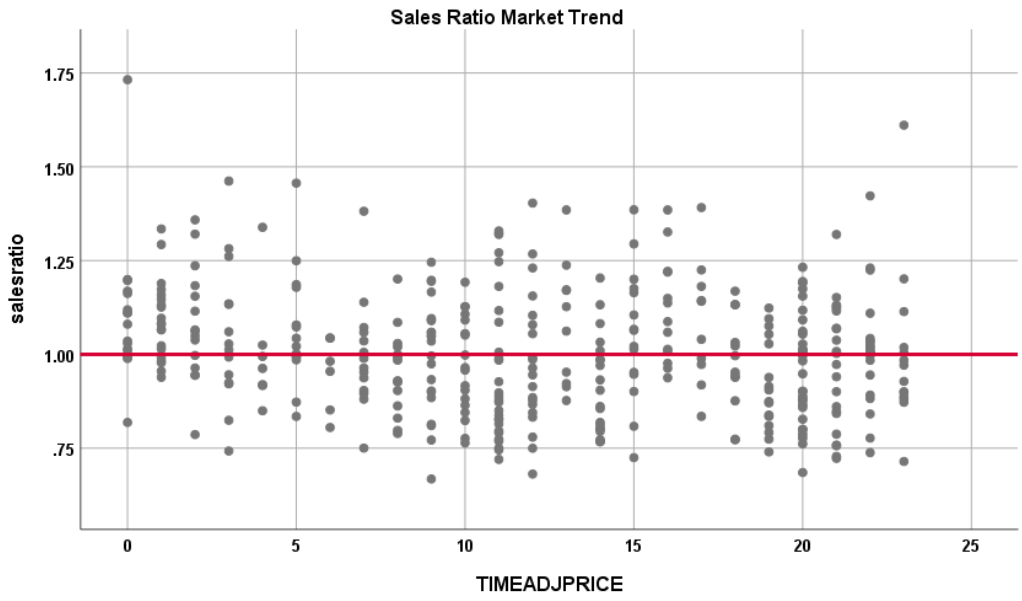
Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period for any residual market trending. The following indicates that there was no statistically significant residual trend based on the sale ratios:

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.051	.016		65.663	.000
	SalePeriod	-.004	.001	-.163	-3.308	.001

a. Dependent Variable: salesratio



Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the change in actual value per square foot between taxable years 2020 and 2022, as follows:

Report

DIFF

sold	N	Median	Mean
UNSOLD	3117	1.44	1.42
SOLD	378	1.60	1.61

We also compared the change in value between sold and unsold residential properties stratified by Neighborhood, as follows:

Report

DIFF

NBHD	sold	N	Median	Mean
100	UNSOLD	479	1.27	1.29
	SOLD	70	1.43	1.42
200	UNSOLD	1548	1.48	1.44
	SOLD	167	1.62	1.64
300	UNSOLD	695	1.58	1.54
	SOLD	106	1.65	1.72
400	UNSOLD	393	1.25	1.28
	SOLD	35	1.49	1.49

Although there is a difference between the sold and unsold median change in values both by class and by Neighborhood, this is likely due to the superior condition and quality overall of the sold properties as compares to the unsold properties. This was verified by using the following crosstabs of sold/unsold by condition and quality:

CONDITION * sold Crosstabulation

			sold 0	1	Total
CONDITION		Count	309	5	314
		% within sold	9.9%	1.3%	9.0%
	AV	Count	1910	211	2121
		% within sold	61.3%	55.8%	60.7%
	BW	Count	2	0	2
		% within sold	0.1%	0.0%	0.1%
	EX	Count	1	1	2
		% within sold	0.0%	0.3%	0.1%
	FR	Count	285	10	295
		% within sold	9.1%	2.6%	8.4%
	GD	Count	525	120	645
		% within sold	16.8%	31.7%	18.5%
	PR	Count	20	0	20
		% within sold	0.6%	0.0%	0.6%
	VG	Count	65	31	96
		% within sold	2.1%	8.2%	2.7%
Total		Count	3117	378	3495
		% within sold	100.0%	100.0%	100.0%

QUALITY * sold Crosstabulation

			sold		
			0	1	Total
QUALITY	3	Count	134	2	136
		% within sold	4.4%	0.5%	4.0%
	4	Count	284	17	301
		% within sold	9.3%	4.5%	8.8%
	5	Count	1308	105	1413
		% within sold	42.7%	27.8%	41.1%
	7	Count	1150	193	1343
		% within sold	37.6%	51.1%	39.0%
	8	Count	171	56	227
		% within sold	5.6%	14.8%	6.6%
	9	Count	15	5	20
		% within sold	0.5%	1.3%	0.6%
Total		Count	3062	378	3440
		% within sold	100.0%	100.0%	100.0%

We concluded that sold and unsold residential properties were valued in a consistent manner overall once condition and quality were considered.

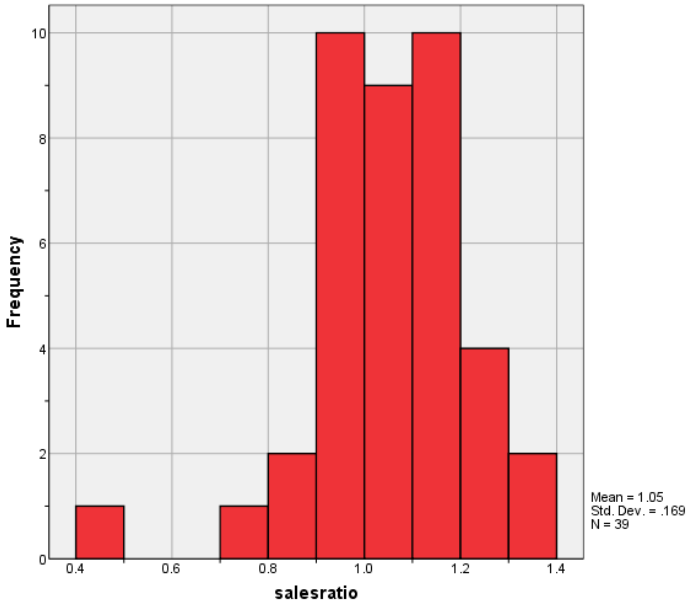
IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 39 qualified commercial and industrial sales in the 60-month sale period ending June 30, 2022.

The sales ratio analysis results were as follows:

Median	**1.026**
Price Related Differential	**1.001**
Coefficient of Dispersion	**11.6**

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



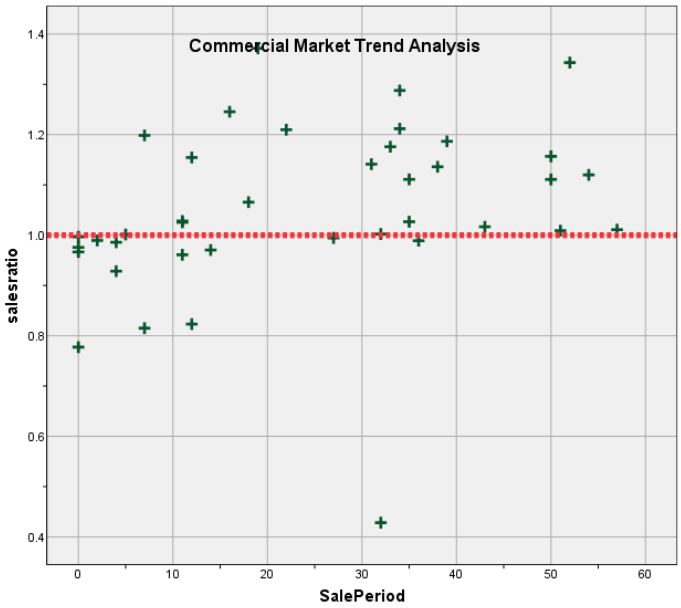
Commercial Market Trend Analysis

We next analyzed the commercial sale data to determine if the assessor has adequately addressed market trending. The following analyzes the sale trend over the 5 year period ending June 30, 2022:

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.981	.044		22.188	.000
	SalePeriod	.003	.001	.301	1.918	.063

a. Dependent Variable: salesratio



The market trend results indicated no statistically significant market trend. We concur that no market trend adjustments were warranted for properties in this class for Custer County.

Sold/Unsold Analysis

We compared the change in actual value per square foot between taxable years 2020 and 2022 between sold and unsold commercial/industrial properties in Custer County to determine if sold and unsold properties were valued consistently, as follows:

Report

DIFF

sold	N	Median	Mean
UNSOLD	122	1.21	1.32
SOLD	38	1.13	1.23

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of DIFF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.006	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .00.

We also compared commercial sold and unsold properties stratified by subclass, as follows:

Report

DIFF

ABSTRIMP	sold	N	Median	Mean
2212.00	UNSOLD	12	1.20	1.18
	SOLD	7	1.25	1.37
2220.00	UNSOLD	14	1.17	1.18
	SOLD	9	1.15	1.20
2230.00	UNSOLD	21	1.15	1.19
	SOLD	8	1.15	1.28

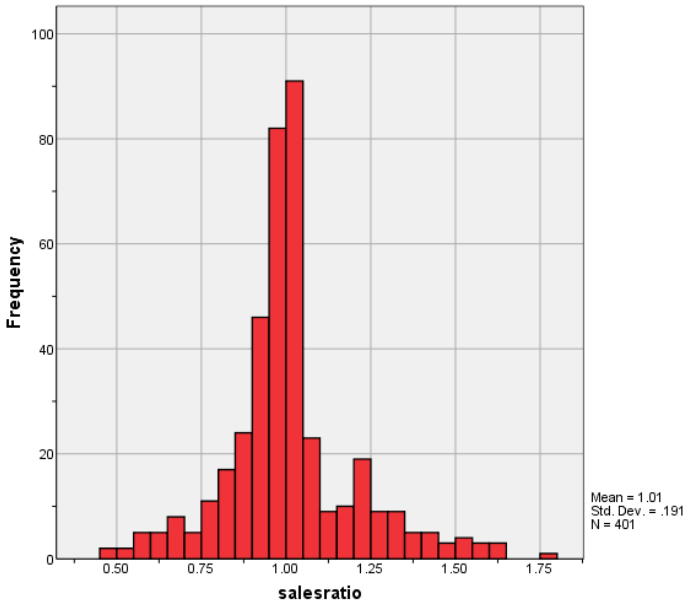
The above results indicate that sold and unsold commercial properties were valued in a consistent manner overall.

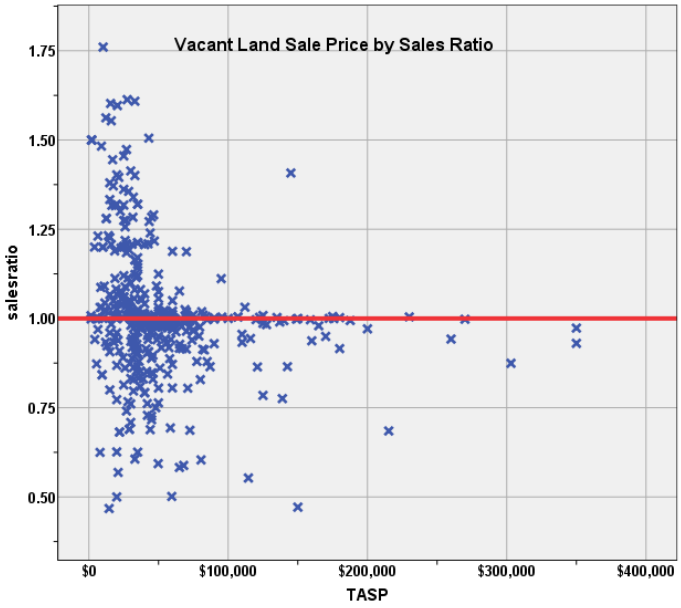
V. VACANT LAND SALE RESULTS

There were 401 qualified vacant land sales in the 24-month sale period ending June 30, 2022. The sales ratio analysis results are as follows:

Median	**0.998**
Price Related Differential	**1.036**
Coefficient of Dispersion	**12.5**

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





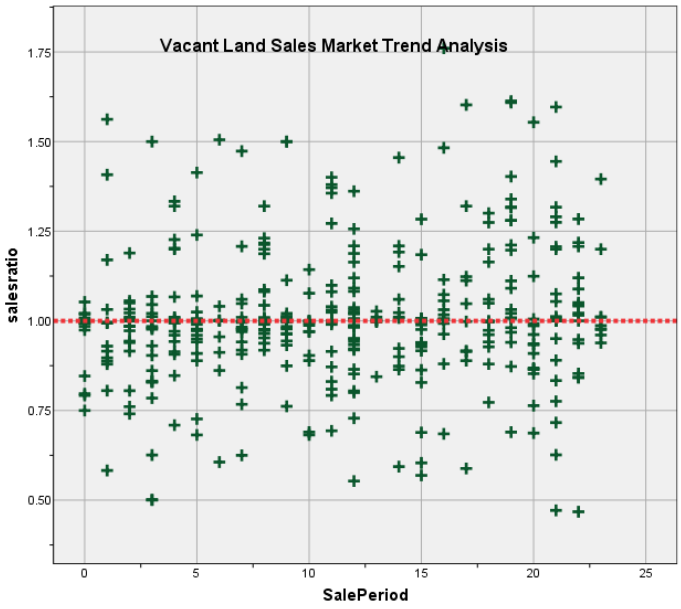
Vacant Land Market Trend Analysis

The vacant land sales were next analyzed for residual market trending, examining the sale ratios across the 24-month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.970	.018		52.455	.000
	SalePeriod	.003	.001	.122	2.465	.014

a. Dependent Variable: salesratio



The above analysis indicated that no statistically significant market trend was present in the sales ratio for vacant land. We therefore concluded that the assessor effectively adjusted for market trending for this class of property.

Sold/Unsold Analysis

We compared the median change in actual value between taxable years 2020 and 2022 for vacant land properties to determine if sold and unsold properties were valued consistently. We performed the analysis overall and by stratifying the properties by subdivisions with at least 5 sales, as follows:

Report
DIFF

sold	N	Median	Mean
UNSOLD	2372	1.14	2.12
SOLD	401	1.37	1.88

Report
DIFF

SUBDIVNO	sold	N	Median	Mean
13000	UNSOLD	122	2.07	2.08
	SOLD	18	2.07	1.95
18400	UNSOLD	13	1.40	1.45
	SOLD	5	1.40	1.32
28000	UNSOLD	58	2.00	1.99
	SOLD	5	2.00	1.68
3300	UNSOLD	23	1.26	1.27
	SOLD	4	1.26	1.20
52100	UNSOLD	43	1.17	1.22
	SOLD	6	1.17	1.28
5300	UNSOLD	20	1.33	1.35
	SOLD	9	1.33	1.43
57000	UNSOLD	52	1.46	1.50
	SOLD	12	1.46	1.45
60100	UNSOLD	13	1.00	1.00
	SOLD	5	1.00	1.20
62000	UNSOLD	11	1.11	1.29
	SOLD	11	1.00	1.24
65200	UNSOLD	9	1.67	1.73
	SOLD	5	1.83	1.97
68000	UNSOLD	26	1.19	1.21
	SOLD	11	1.19	1.24
69300	UNSOLD	6	1.20	1.22
	SOLD	9	1.29	1.53
800	UNSOLD	16	1.24	1.45
	SOLD	5	.93	1.38
94000	UNSOLD	25	1.20	1.20
	SOLD	12	1.27	1.35
94100	UNSOLD	43	1.00	1.00
	SOLD	11	1.18	1.23
94200	UNSOLD	33	1.20	1.24
	SOLD	14	1.20	1.43
94300	UNSOLD	58	1.34	1.42
	SOLD	23	1.34	1.34

94400	UNSOLD	20	1.82	1.79
	SOLD	3	1.84	1.81
94500	UNSOLD	11	1.16	1.18
	SOLD	8	1.34	1.37
99000	UNSOLD	49	1.50	1.52
	SOLD	8	1.50	1.62
99100	UNSOLD	31	1.60	1.66
	SOLD	7	1.78	1.80
99200	UNSOLD	36	1.43	1.44
	SOLD	4	1.34	1.50

The above results indicated that sold and unsold vacant land properties were valued consistently.

V. CONCLUSION

Based on this statistical analysis, there were no significant compliance issues concluded for Custer County as of the date of this report.

STATISTICAL ABSTRACT

Residential

Ratio Statistics for CURRTOT / TASP												
	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
1.005	.990	1.021	.999	.989	1.011	95.9%	.997	.979	1.014	1.009	.125	16.2%

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.

Commercial/Industrial

Ratio Statistics for CURRTOT / TASP												
	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
1.050	.995	1.105	1.026	.995	1.136	97.6%	1.049	1.008	1.090	1.001	.116	16.1%

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

Vacant Land

Ratio Statistics for CURRLND / TASP												
	95% Confidence Interval for Mean			95% Confidence Interval for Median				95% Confidence Interval for Weighted Mean				Coefficient of Variation
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
1.009	.990	1.027	.998	.993	1.000	95.4%	.973	.956	.991	1.036	.125	18.9%

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

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212.00	399	99.3%
	1721.00	1	0.2%
	1971.00	1	0.2%
	4277.00	1	0.2%
Overall		402	100.0%
Excluded		1	
Total		403	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212.00	1.000	1.007	.124	16.1%
1721.00	1.456	1.000	.000	.
1971.00	.767	1.000	.000	.
4277.00	.902	1.000	.000	.
Overall	.999	1.009	.125	16.3%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	10	2.5%
	75 to 100	6	1.5%
	50 to 75	31	7.7%
	25 to 50	125	31.1%
	5 to 25	181	45.0%
	5 or Newer	49	12.2%
Overall		402	100.0%
Excluded		1	
Total		403	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.917	1.008	.095	12.0%
75 to 100	.933	1.026	.085	12.8%
50 to 75	1.002	1.012	.103	13.4%
25 to 50	.984	1.016	.133	17.3%
5 to 25	1.008	1.009	.124	16.2%
5 or Newer	1.035	1.012	.120	15.2%
Overall	.999	1.009	.125	16.3%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	14	3.5%
	500 to 1,000 sf	58	14.4%
	1,000 to 1,500 sf	124	30.8%
	1,500 to 2,000 sf	95	23.6%
	2,000 to 3,000 sf	83	20.6%
	3,000 sf or Higher	28	7.0%
Overall		402	100.0%
Excluded		1	
Total		403	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	1.028	1.094	.151	23.6%
500 to 1,000 sf	.927	1.026	.155	21.0%
1,000 to 1,500 sf	.996	1.016	.117	14.7%
1,500 to 2,000 sf	.976	1.007	.119	15.1%
2,000 to 3,000 sf	1.028	1.019	.111	15.1%
3,000 sf or Higher	1.077	1.017	.124	15.4%
Overall	.999	1.009	.125	16.3%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	3	2	0.5%
	4	18	4.5%
	5	113	28.1%
	7	202	50.2%
	8	62	15.4%
	9	5	1.2%
Overall		402	100.0%
Excluded		1	
Total		403	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
3	.810	1.000	.176	24.9%
4	1.025	1.039	.175	24.5%
5	1.001	1.016	.122	15.4%
7	.989	1.013	.120	15.4%
8	1.032	1.014	.124	16.5%
9	.986	.965	.113	19.6%
Overall	.999	1.009	.125	16.3%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION		6	1.5%
	AV	219	54.5%
	EX	1	0.2%
	FR	10	2.5%
	GD	131	32.6%
	VG	35	8.7%
Overall		402	100.0%
Excluded		1	
Total		403	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
	1.042	1.028	.106	14.7%
AV	1.000	1.007	.125	15.9%
EX	1.329	1.000	.000	.
FR	1.028	1.054	.230	31.3%
GD	.989	1.013	.119	15.2%
VG	1.028	1.013	.107	15.4%
Overall	.999	1.009	.125	16.3%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	$25K to $50K	1	2.6%
	$50K to $100K	2	5.1%
	$100K to $150K	6	15.4%
	$150K to $200K	6	15.4%
	$200K to $300K	13	33.3%
	$300K to $500K	7	17.9%
	$500K to $750K	4	10.3%
Overall		39	100.0%
Excluded		0	
Total		39	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
$25K to $50K	.428	1.000	.000	.
$50K to $100K	1.176	1.002	.030	4.2%
$100K to $150K	1.069	1.003	.129	16.9%
$150K to $200K	1.115	1.001	.069	9.5%
$200K to $300K	1.017	1.004	.093	14.4%
$300K to $500K	.997	.993	.117	16.2%
$500K to $750K	.998	.997	.038	6.8%
Overall	1.026	1.001	.116	16.6%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	.00	1	2.6%
	1546.33	1	2.6%
	1712.00	4	10.3%
	1713.50	1	2.6%
	1716.00	1	2.6%
	1723.50	1	2.6%
	1884.00	1	2.6%
	2212.00	7	17.9%
	2215.00	1	2.6%
	2216.00	1	2.6%
	2220.00	9	23.1%
	2230.00	8	20.5%
	2235.00	2	5.1%
	3215.00	1	2.6%
Overall		39	100.0%
Excluded		0	
Total		39	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.428	1.000	.000	.
1546.33	1.187	1.000	.000	.
1712.00	1.113	1.015	.110	13.4%
1713.50	1.157	1.000	.000	.
1716.00	1.001	1.000	.000	.
1723.50	.777	1.000	.000	.
1884.00	1.028	1.000	.000	.
2212.00	.989	1.012	.081	15.4%
2215.00	1.372	1.000	.000	.
2216.00	1.154	1.000	.000	.
2220.00	1.066	1.014	.061	7.6%
2230.00	1.010	1.035	.107	16.4%
2235.00	.905	.936	.099	14.0%
3215.00	1.120	1.000	.000	.
Overall	1.026	1.001	.116	16.6%

Age

Case Processing Summary

		Count	Percent
AgeRec	0	1	2.6%
	Over 100	5	12.8%
	75 to 100	2	5.1%
	50 to 75	10	25.6%
	25 to 50	8	20.5%
	5 to 25	13	33.3%
Overall		39	100.0%
Excluded		0	
Total		39	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.428	1.000	.000	.
Over 100	1.009	1.021	.069	14.0%
75 to 100	.978	.994	.017	2.4%
50 to 75	1.124	1.029	.075	9.8%
25 to 50	1.022	.995	.078	11.1%
5 to 25	1.066	1.008	.136	17.0%
Overall	1.026	1.001	.116	16.6%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	0	1	2.6%
	LE 500 sf	2	5.1%
	500 to 1,000 sf	3	7.7%
	1,000 to 1,500 sf	5	12.8%
	1,500 to 2,000 sf	6	15.4%
	2,000 to 3,000 sf	6	15.4%
	3,000 sf or Higher	16	41.0%
Overall		39	100.0%
Excluded		0	
Total		39	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.428	1.000	.000	.
LE 500 sf	1.176	1.002	.030	4.2%
500 to 1,000 sf	.823	1.003	.120	24.7%
1,000 to 1,500 sf	.989	1.017	.055	8.4%
1,500 to 2,000 sf	1.037	1.044	.091	14.5%
2,000 to 3,000 sf	1.074	1.012	.083	10.0%
3,000 sf or Higher	1.022	1.015	.112	15.7%
Overall	1.026	1.001	.116	16.6%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	3	1	2.6%
	4	21	55.3%
	5	14	36.8%
	7	1	2.6%
	8	1	2.6%
Overall		38	100.0%
Excluded		1	
Total		39	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
3	1.176	1.000	.000	.
4	1.017	1.031	.109	14.9%
5	1.018	.996	.075	10.5%
7	1.372	1.000	.000	.
8	1.157	1.000	.000	.
Overall	1.026	1.015	.104	13.8%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	100	24.9%
	$25K to $50K	170	42.4%
	$50K to $100K	90	22.4%
	$100K to $150K	23	5.7%
	$150K to $200K	11	2.7%
	$200K to $300K	4	1.0%
	$300K to $500K	3	0.7%
Overall		401	100.0%
Excluded		0	
Total		401	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.042	1.007	.179	24.3%
$25K to $50K	.996	1.006	.127	17.9%
$50K to $100K	.984	1.000	.068	12.0%
$100K to $150K	.990	1.000	.103	18.8%
$150K to $200K	.994	1.000	.023	3.6%
$200K to $300K	.970	.991	.097	17.3%
$300K to $500K	.930	.997	.035	5.3%
Overall	.998	1.036	.125	19.1%

Subclass

Case Processing Summary

		Count	Percent
ABSTRLND	.00	5	1.2%
	100.00	333	83.0%
	151.00	9	2.2%
	155.00	1	0.2%
	200.00	1	0.2%
	400.00	3	0.7%
	510.00	1	0.2%
	530.00	2	0.5%
	540.00	3	0.7%
	550.00	9	2.2%
	560.00	1	0.2%
	1112.00	28	7.0%
	1135.00	3	0.7%
	2130.00	1	0.2%
	3115.00	1	0.2%
Overall		401	100.0%
Excluded		0	
Total		401	

Ratio Statistics for CURRLND / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	.997	.993	.107	18.5%
100.00	.996	1.031	.127	19.3%
151.00	.987	1.024	.154	22.0%
155.00	.917	1.000	.000	.
200.00	1.081	1.000	.000	.
400.00	1.010	1.016	.035	6.8%
510.00	.999	1.000	.000	.
530.00	1.248	.982	.166	23.5%
540.00	.916	.945	.137	24.6%
550.00	1.000	1.003	.048	9.1%
560.00	.973	1.000	.000	.
1112.00	1.006	1.089	.119	19.1%
1135.00	1.089	1.135	.217	34.1%
2130.00	.977	1.000	.000	.
3115.00	1.037	1.000	.000	.
Overall	.998	1.036	.125	19.1%