



2016

# TELLER COUNTY PROPERTY ASSESSMENT STUDY

---



**WILDROSE**  
APPRAISAL, INCORPORATED  
**Audit Division**



September 15, 2016

Mr. Mike Mauer  
Director of Research  
Colorado Legislative Council  
Room 029, State Capitol Building  
Denver, Colorado 80203

**RE: Final Report for the 2016 Colorado Property Assessment Study**

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2016 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.

A handwritten signature in black ink that reads "Harry J. Fuller". The signature is written in a cursive, flowing style.

Harry J. Fuller  
Project Manager  
Wildrose Appraisal Inc. – Audit Division

## TABLE OF CONTENTS

Introduction .....	3
Regional/Historical Sketch of Teller County .....	4
Ratio Analysis.....	6
Time Trending Verification .....	8
Sold/Unsold Analysis .....	9
Agricultural Land Study .....	11
<i>Agricultural Land</i> .....	11
<i>Agricultural Outbuildings</i> .....	12
<i>Agricultural Land Under Improvements</i> .....	13
Sales Verification.....	14
Economic Area Review and Evaluation .....	16
Natural Resources .....	17
<i>Earth and Stone Products</i> .....	17
<i>Producing Mines</i> .....	17
Vacant Land.....	18
Possessory Interest Properties .....	19
Personal Property Audit .....	20
Wildrose Auditor Staff.....	22
Appendices.....	23

# 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.

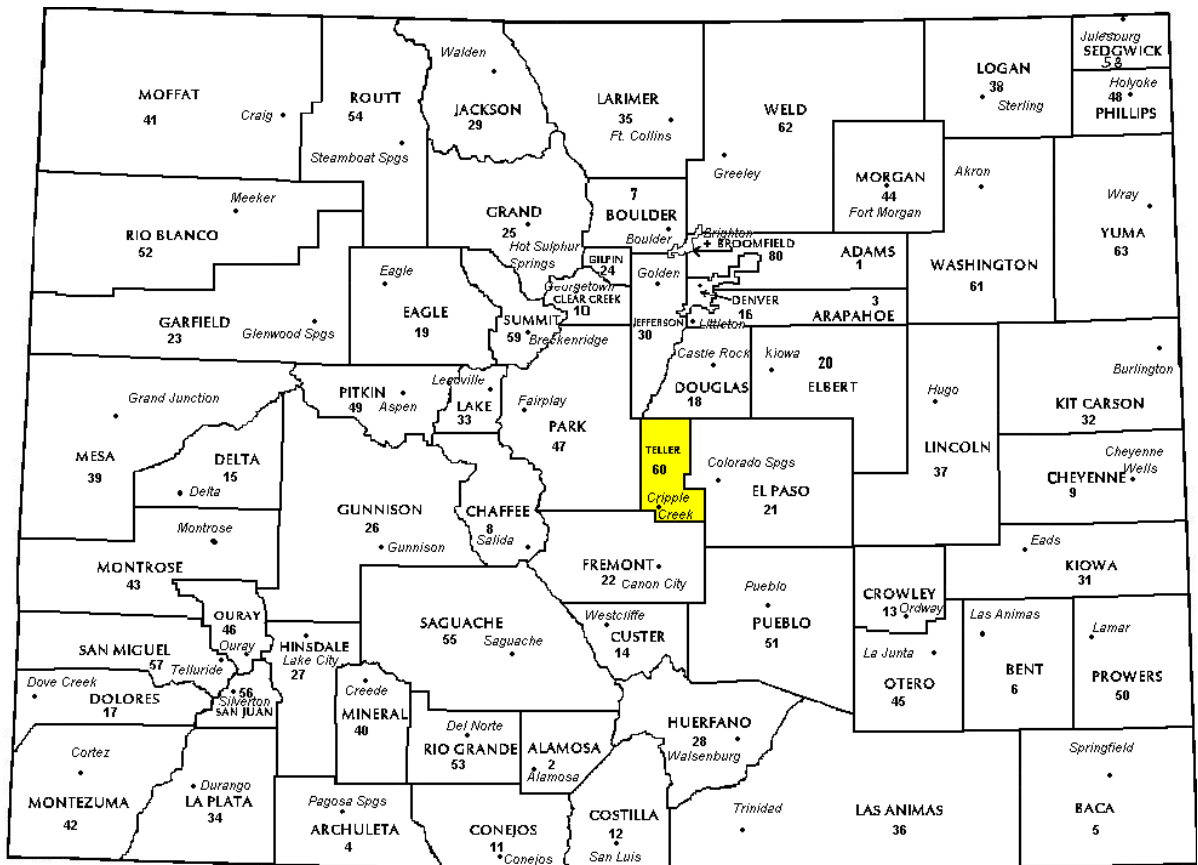
Wildrose Audit has completed the Property Assessment Study for 2016 and is pleased to report its findings for Teller County in the following report.

# REGIONAL/HISTORICAL SKETCH OF TELLER COUNTY

## Regional Information

Teller 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

Teller County had an estimated population of approximately 23,389 people with 41.9 people per square mile, according to the U.S. Census Bureau's 2014 estimated census data. This represents a 0.2 percent change from April 1, 2010 to July 1, 2014.

Teller County was named after United States Senator Henry M. Teller. Teller County was carved from the western slope of Pikes Peak, which had been entirely within El Paso County, in 1899.

The county seat is Cripple Creek. On October 20, 1890, Robert Miller "Bob" Womack discovered a rich ore and the last great Colorado gold rush was on. Thousands of prospectors flocked to the region, and before long W. S. Stratton located the famous Independence lode, one of the largest gold strikes in history. In three years, the population increased from 500 to 10,000. By 1900 Cripple

Creek and its sister city, Victor, were substantial communities.

Through 2005, the Cripple Creek district produced about 23.5 million troy ounces (731 tonnes) of gold. The old underground mines are exhausted, but open pit mining has operated since 1994 east of Cripple Creek, near its sister city of Victor, Colorado.

With many empty storefronts and picturesque homes, Cripple Creek once drew interest as a ghost town. At one point the population dropped to a few hundred, although Cripple Creek was never entirely deserted.

Colorado voters allowed Cripple Creek to establish legalized gambling in 1991 and it is currently more of a gambling and tourist town than a ghost town. Casinos now occupy many historic buildings. Casino gambling has been successful in bringing revenue and vitality back into the area.

*(www.Wikipedia.org)*

# RATIO ANALYSIS

## Methodology

All significant classes of properties were analyzed. Sales were collected for each property class over the appropriate sale period, which was typically defined as the 18-month period between January 2013 and June 2014. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2014 in 6-month increments. If there were still fewer than 30 sales, supplemental appraisals were performed and treated as proxy sales. Residential sales for all counties using this method totaled at least 30 per county. For commercial sales, the total number analyzed was allowed, in some cases, to fall below 30. There were no sale quantity issues for counties requiring vacant land analysis or condominium analysis. 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. For the largest 11 counties, the residential ratio statistics were broken down by economic area as well.

## 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 Teller County are:

<b>Teller County Ratio Grid</b>					
<b>Property Class</b>	<b>Number of Qualified Sales</b>	<b>Unweighted Median Ratio</b>	<b>Price Related Differential</b>	<b>Coefficient of Dispersion</b>	<b>Time Trend Analysis</b>
Commercial/Industrial	37	0.954	1.035	17.1	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	1,706	0.972	1.047	15.6	Compliant
Vacant Land	389	1.030	1.083	19.7	Compliant

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

Teller 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.

<b>Sold/Unsold Results</b>	
<b>Property Class</b>	<b>Results</b>
Commercial/Industrial	Compliant
Condominium	N/A
Single Family	Compliant
Vacant Land	Compliant

**Conclusions**

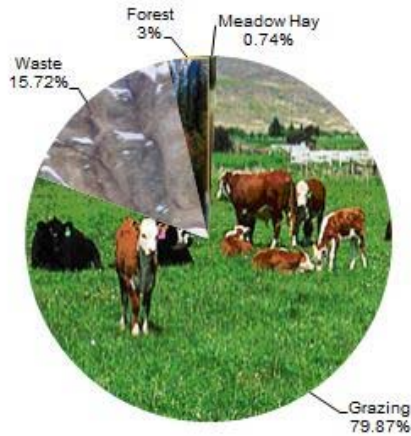
After applying the above described methodologies, it is concluded that Teller County is reasonably treating its sold and unsold properties in the same manner.

**Recommendations**

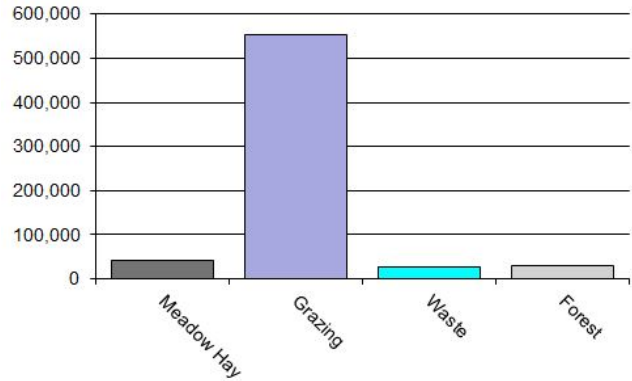
None

# 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:

<b>Teller County Agricultural Land Ratio Grid</b>						
<b>Abstract Code</b>	<b>Land Class</b>	<b>Number Of Acres</b>	<b>County Value Per Acre</b>	<b>County Assessed Total Value</b>	<b>WRA Total Value</b>	<b>Ratio</b>
4137	Meadow Hay	656	63.14	41,419	41,334	1.00
4147	Grazing	70,451	7.84	552,322	552,416	1.00
4177	Forest	3,231	9.39	30,335	30,332	1.00
4167	Waste	13,867	1.99	27,547	27,547	1.00
<b>Total/Avg</b>		<b>88,205</b>	<b>7.39</b>	<b>651,624</b>	<b>651,630</b>	<b>1.00</b>

### 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.

Property Taxation for the valuation of agricultural outbuildings.

### Recommendations

None

### Conclusions

Teller County has substantially complied with the procedures provided by the Division of

---

## 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

Teller 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
- Aerial Photography/Pictometry

Teller 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.:

- Field Inspections
- In-Person Interviews with Owners/Tenants
- Aerial Photography/Pictometry

Teller 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 2016 for Teller County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 37 sales listed as unqualified.

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

For residential, commercial, and vacant land sales with considerations over \$500, 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.

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.

### **Conclusions**

Teller County appears to be doing a good job of verifying their sales. WRA agreed with the

county's reason for disqualifying each of the sales selected in the sample. There are no recommendations or suggestions.

### **Recommendations**

None



# ECONOMIC AREA REVIEW AND EVALUATION

## **Methodology**

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

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

## **Recommendations**

None

# NATURAL RESOURCES

---

## Earth and Stone Products

---

### Methodology

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

### Conclusions

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

### Recommendations

None

---

## Producing Mines

---

### Methodology

Colorado Revised Statutes (CRS) Article 39, Section 6, and the Assessor's Reference Library (ARL), Volume 3 are the basis for valuing producing mine property. The gross value of the ore extracted during the preceding year is determined. All costs of treatment, reduction, transportation and sale are deducted to estimate gross proceeds. The costs of extraction are deducted from the gross proceeds to estimate net proceeds.

The current value for assessment is determined by determining if 25% of the gross proceeds or 100% of the net proceeds is greater, then applying that number as the valuation for assessment.

### Conclusions

The County valued the producing mine production using acceptable appraisal procedures.

### Recommendations

None

## VACANT LAND

### **Subdivision Discounting**

Subdivisions were reviewed in 2016 in Teller 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 was accomplished by reducing the absorption period by one year. In instances where the number of sales within an approved plat was less than the absorption rate

per year calculated for the plat, the absorption period was left unchanged.

### **Conclusions**

Teller 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.

Teller 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

Teller 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

Teller 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.

Teller 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.

Teller County submitted their personal property written audit plan and was current for the 2016 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
- Businesses with no deletions or additions for 2 or more years



- Non-filing Accounts - Best Information Available
- Accounts protested with substantial disagreement

### **Conclusions**

Teller 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*

**Suzanne Howard**, *Audit Administrative Manager*

**Steve Kane**, *Audit Statistician*

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

**J. Andrew Rodriguez**, *Field Analyst*

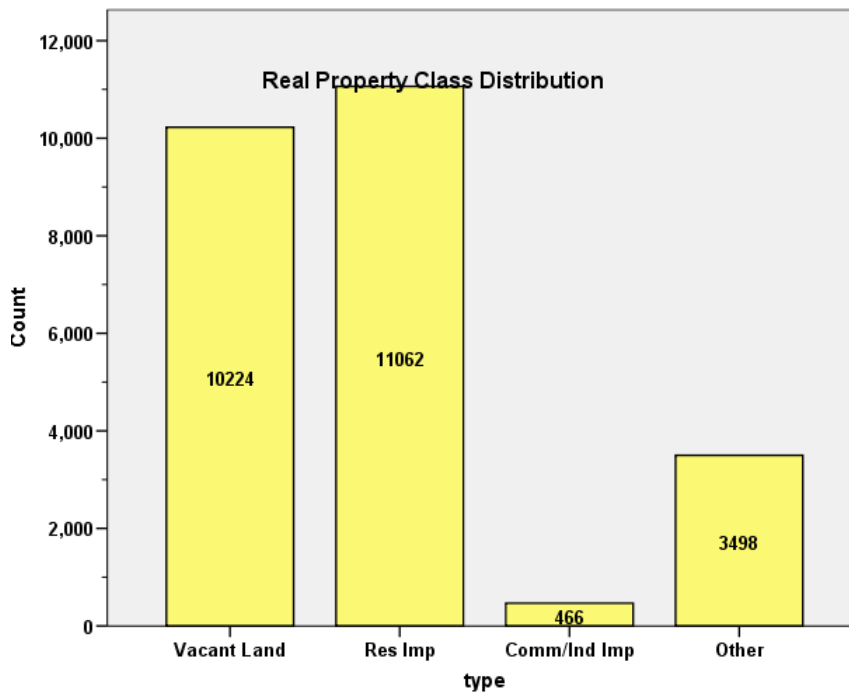
# APPENDICES



**STATISTICAL COMPLIANCE REPORT  
 FOR TELLER COUNTY  
 2016**

**I. OVERVIEW**

Teller County is located in northwestern Colorado. The county has a total of 25,250 real property parcels, according to data submitted by the county assessor’s office in 2016. 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 and 1112) accounted for 78.6% of all vacant land parcels.

For residential improved properties, single family properties accounted for 97.3% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 1.9% of all such properties in this county.

**II. DATA FILES**

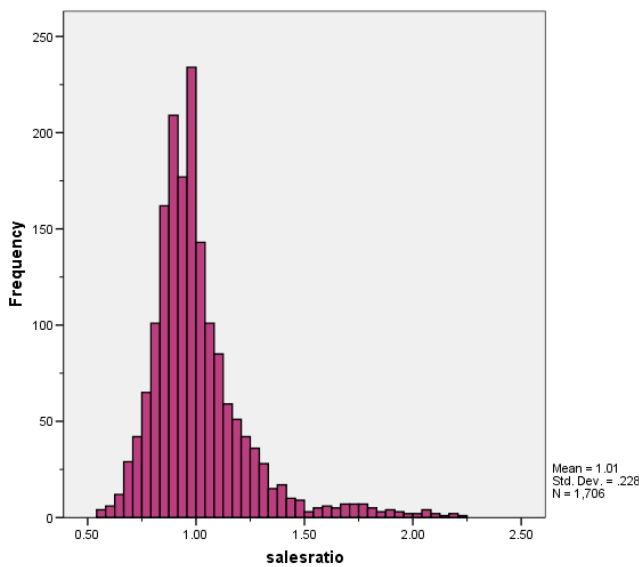
The following sales analyses were based on the requirements of the 2016 Colorado Property Assessment Study. Information was provided by the Teller Assessor’s Office in 2016. The data included all 5 property record files as specified by the Auditor.

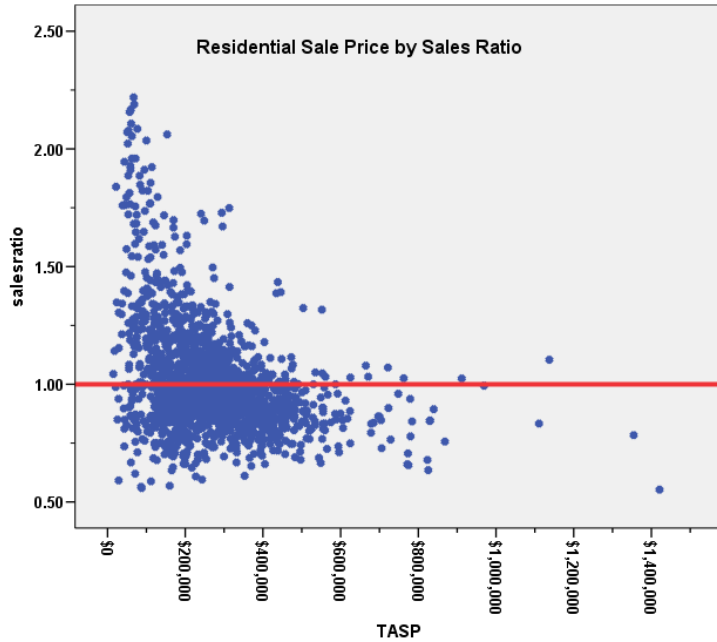
### III. RESIDENTIAL SALES RESULTS

There were **1,717 qualified residential sales** for the 48-month sale period prior to June 30, 2014. We trimmed 11 sales for their extreme sales ratios, resulting in a final count of 1,706 qualified residential sales. The sales ratio analysis results were as follows:

Median	<b>0.972</b>
Price Related Differential	<b>1.047</b>
Coefficient of Dispersion	<b>15.6</b>

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





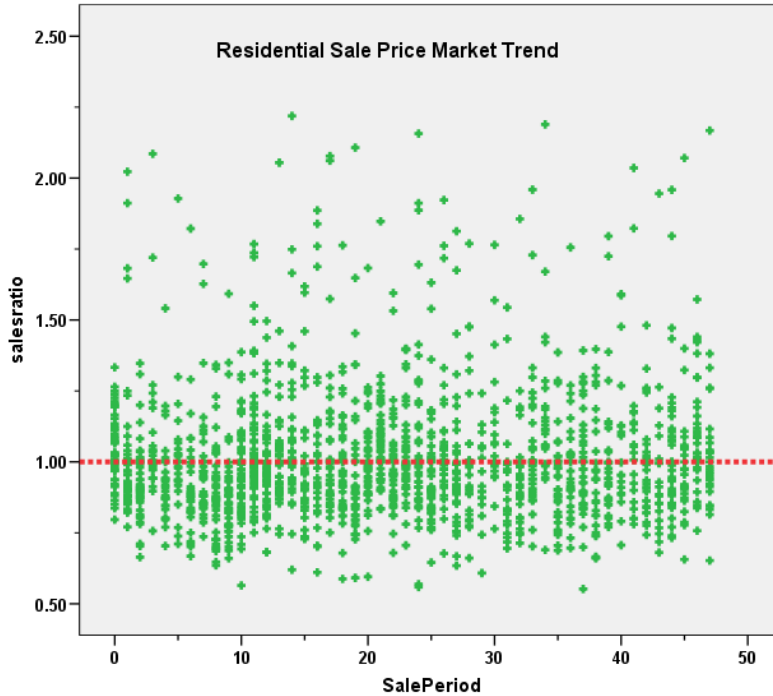
The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

### Residential Market Trend Analysis

We next analyzed the residential dataset using the 18-month sale period for any residual market trending, with the following results:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.990	.010		96.985	.000
	SalePeriod	.001	.000	.058	2.415	.016

a. Dependent Variable: salesratio



While there was a statistically significant trend, the magnitude was not. 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 2016 between each group, as follows:

#### Report

DIFF			
sale	N	Median	Mean
UNSOLD	9,286	1.112	1.592
SOLD	1,706	1.210	1.262

Given the difference between sold and unsold rates of change, we next compared sold and unsold properties using the same metrics by economic area, as follows:

### Report

DIFF				
ECONAREA	sold	N	Median	Mean
1	UNSOLD	4,537	1.189	1.838
	SOLD	853	1.255	1.280
3	UNSOLD	3,697	1.043	1.231
	SOLD	749	1.174	1.200
4	UNSOLD	466	1.221	2.298
	SOLD	49	1.273	1.669
5	UNSOLD	353	1.186	1.480
	SOLD	26	1.364	1.627

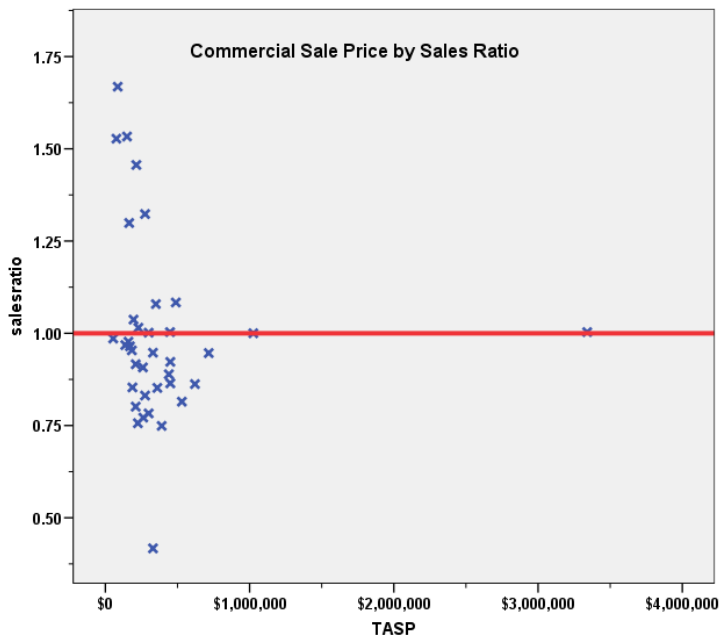
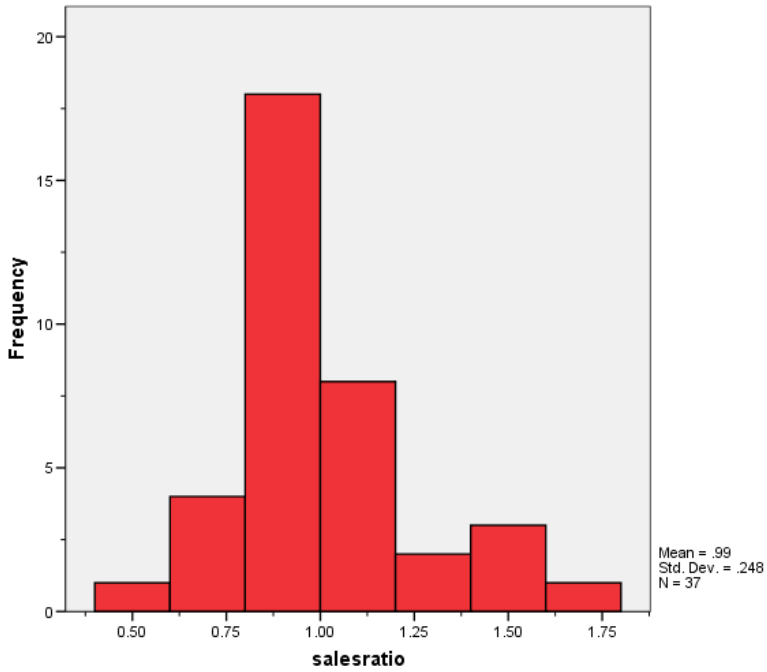
Given the differential between sold and unsold residential properties, we will further investigate this class of property with the county assessor.

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were **37 qualified commercial and industrial sales** for the 60-month sale period prior to June 30, 2014.

Median	<b>.954</b>
Price Related Differential	<b>1.035</b>
Coefficient of Dispersion	<b>17.1</b>

Based on these results, we concluded that the assessor is in compliance. The following histogram and scatter plot of the 37 final sales describe the sales ratio distribution further:

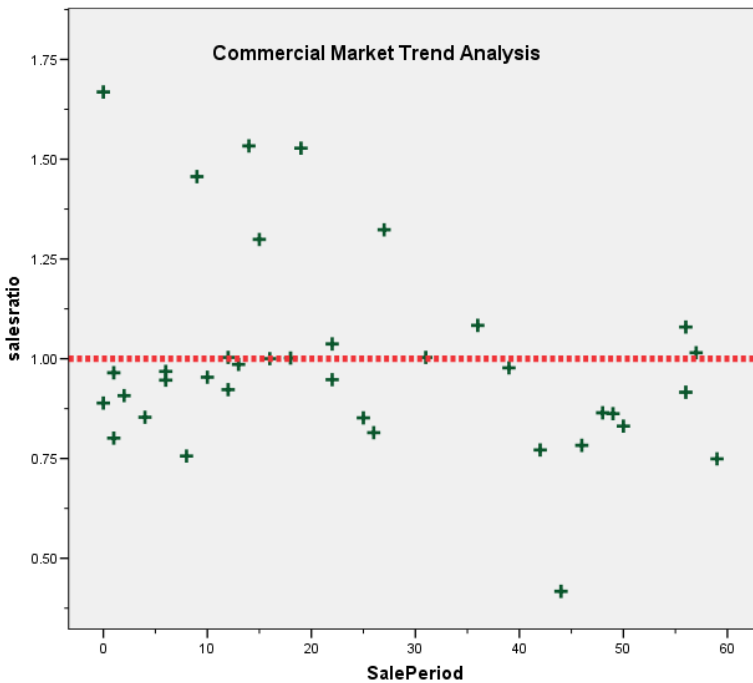


### Commercial Market Trend Analysis

The 37 commercial/industrial sales were next analyzed by subclass for any residual market trending, examining the sale ratios across the 60-month sale period with the following results:

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.091	.064		16.927	.000
	SalePeriod	-.004	.002	-.308	-1.912	.064

a. Dependent Variable: salesratio



The market trend results indicated no significant residual sales ratio trend in the commercial/industrial data. We therefore concluded that the assessor adequately considered market trending in their valuation of commercial and industrial properties.

### Sold/Unsold Analysis

We compared the median change in value per square foot from 2014 to 2016 between sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows:

#### Report

DIFF			
	N	Median	Mean
UNSOLD	423	1.036	1.178
SOLD	37	.955	1.056

### 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	.069	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

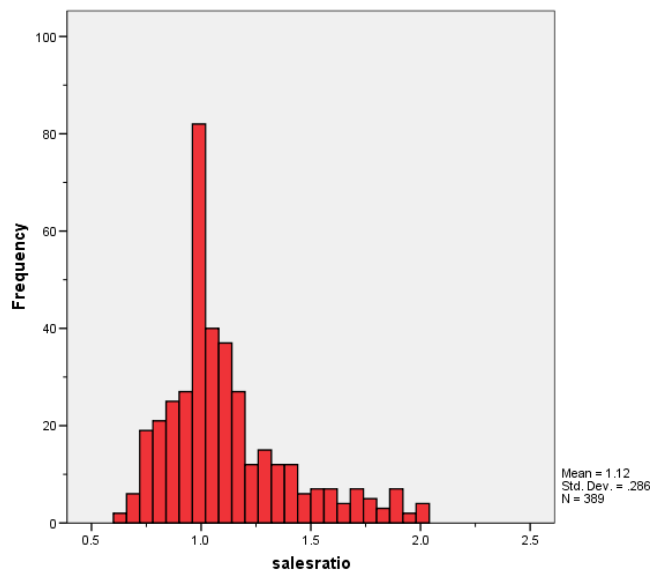
Based on the above results, we concluded that the Teller County assessor was not valuing sold commercial properties at a greater rate than unsold properties.

### V. VACANT LAND SALE RESULTS

The number of qualified vacant land sales was 410 for the 60-month period prior to June 2014. We trimmed 21 sales with extreme sales ratios, for a final total of 389 qualified sales. The sales ratio analysis resulted in the following ratio statistics:

Median	<b>1.030</b>
Price Related Differential	<b>1.083</b>
Coefficient of Dispersion	<b>19.7</b>

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





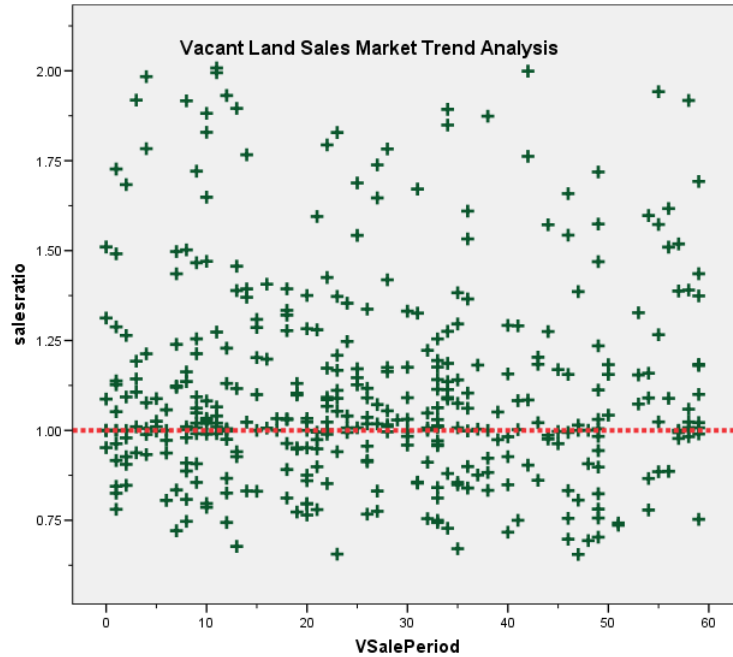


### Vacant Land Market Trend Analysis

The vacant land sales were analyzed, examining the sale ratios across the 60-month sale period with the following results:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	1.127	.027		41.999	.000
	VSalePeriod	.000	.001	-.016	-.324	.746

a. Dependent Variable: salesratio



The market trend results indicated a marginally statistically significant trend, but with a slope coefficient that was not significant. We concur that no market trend adjustments were warranted for properties in this class for Teller County.

### Sold/Unsold Analysis

We compared the median change in actual value between 2014 and 2016 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

#### Report

DIFF			
sale	N	Median	Mean
UNSOLD	8,323	1.079	1.134
SOLD	357	1.013	1.046

The above results indicated that sold vacant land properties had a median change in value that was less than the median change in value for unsold properties.

### V. AGRICULTURAL IMPROVEMENTS ANALYSIS

The final statistical verification concerned the assigned actual values for agricultural residential improvements. We compared the actual value per square foot rate for this group and compared it to rates assigned to residential single family improvements in Teller County.

The following indicates that agricultural residential improvements were valued in a manner similar to the single family residential improvements in this county:

### Report

ImpValSF			
ABSTRIMP	N	Median	Mean
1212	10,762	\$107.79	\$110.79
4277	115	\$107.00	\$110.58

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of ImpValSF is the same across categories of ABSTRIMP.	Independent-Samples Mann-Whitney U Test	.838	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

## VI. CONCLUSIONS

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

## STATISTICAL ABSTRACT

### Residential

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 Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
1.010	1.000	1.021	.972	.960	.981	95.0%	.965	.956	.974	1.047	.156	22.5%

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

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 Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
.994	.911	1.076	.954	.889	1.002	95.3%	.960	.909	1.011	1.035	.171	25.0%

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

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 Mean Centered
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			
1.119	1.091	1.148	1.030	1.011	1.062	95.8%	1.034	1.010	1.057	1.083	.197	25.6%

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

**Residential Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	5	0.3%
	\$25K to \$50K	22	1.3%
	\$50K to \$100K	119	7.0%
	\$100K to \$150K	188	11.0%
	\$150K to \$200K	274	16.1%
	\$200K to \$300K	543	31.8%
	\$300K to \$500K	467	27.4%
	\$500K to \$750K	69	4.0%
	\$750K to \$1,000K	15	0.9%
	Over \$1,000K	4	0.2%
Overall		1706	100.0%
Excluded		0	
Total		1706	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.142	.980	.202	32.8%
\$25K to \$50K	1.255	.978	.274	32.3%
\$50K to \$100K	1.232	1.013	.273	34.8%
\$100K to \$150K	1.043	1.007	.186	25.2%
\$150K to \$200K	.980	1.001	.148	20.6%
\$200K to \$300K	.994	1.000	.116	15.9%
\$300K to \$500K	.917	1.003	.100	13.7%
\$500K to \$750K	.862	1.000	.098	14.2%
\$750K to \$1,000K	.842	.995	.134	16.5%
Over \$1,000K	.809	1.021	.186	28.1%
Overall	.972	1.047	.156	23.8%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRIMP	1212	1683	98.7%
	1230	23	1.3%
Overall		1706	100.0%
Excluded		0	
Total		1706	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212	.970	1.045	.154	23.2%
1230	1.008	1.034	.309	48.6%
Overall	.972	1.047	.156	23.8%

## Improvement Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	53	3.1%
	75 to 100	13	0.8%
	50 to 75	54	3.2%
	25 to 50	638	37.4%
	5 to 25	923	54.1%
	5 or Newer	25	1.5%
Overall		1706	100.0%
Excluded		0	
Total		1706	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.961	1.102	.268	39.1%
75 to 100	.938	1.120	.257	36.7%
50 to 75	1.000	1.028	.165	21.5%
25 to 50	.969	1.034	.145	21.2%
5 to 25	.972	1.052	.156	24.6%
5 or Newer	.922	1.000	.083	12.0%
Overall	.972	1.047	.156	23.8%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	9	0.5%
	500 to 1,000 sf	262	15.4%
	1,000 to 1,500 sf	581	34.1%
	1,500 to 2,000 sf	452	26.5%
	2,000 to 3,000 sf	270	15.8%
	3,000 sf or Higher	132	7.7%
Overall		1706	100.0%
Excluded		0	
Total		1706	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.897	1.003	.159	21.2%
500 to 1,000 sf	.988	1.047	.179	26.3%
1,000 to 1,500 sf	.977	1.033	.148	22.1%
1,500 to 2,000 sf	.965	1.043	.142	21.9%
2,000 to 3,000 sf	.954	1.052	.161	25.8%
3,000 sf or Higher	.960	1.072	.175	28.1%
Overall	.972	1.047	.156	23.8%



## Improved Quality

### Case Processing Summary

		Count	Percent
QUALITY	Average	719	42.1%
	Average Plus	84	4.9%
	Fair	334	19.6%
	Fair Plus	521	30.5%
	Good	12	0.7%
	Low	35	2.1%
	Very Good	1	0.1%
Overall		1706	100.0%
Excluded		0	
Total		1706	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.967	1.032	.129	19.6%
Average Plus	.931	1.025	.142	20.4%
Fair	.991	1.082	.223	32.6%
Fair Plus	.976	1.028	.143	21.5%
Good	.873	1.118	.209	39.1%
Low	.897	1.038	.205	26.0%
Very Good	1.104	1.000	.000	.
Overall	.972	1.047	.156	23.8%

## Improved Condition

### Case Processing Summary

		Count	Percent
CONDITION	Average	1450	85.0%
	Badly Worn	17	1.0%
	Excellent	12	0.7%
	Fair	166	9.7%
	Good	56	3.3%
	Worn Out	5	0.3%
Overall		1706	100.0%
Excluded		0	
Total		1706	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.970	1.040	.147	22.6%
Badly Worn	.982	.974	.198	24.3%
Excellent	.943	1.008	.091	14.3%
Fair	1.000	1.076	.224	31.3%
Good	.929	1.076	.156	26.7%
Worn Out	1.142	1.036	.090	12.0%
Overall	.972	1.047	.156	23.8%

**Commercial Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	\$50K to \$100K	3	8.1%
	\$100K to \$150K	2	5.4%
	\$150K to \$200K	6	16.2%
	\$200K to \$300K	11	29.7%
	\$300K to \$500K	10	27.0%
	\$500K to \$750K	3	8.1%
	Over \$1,000K	2	5.4%
	Overall	37	100.0%
Excluded		0	
Total		37	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
\$50K to \$100K	1.527	.964	.149	25.9%
\$100K to \$150K	1.251	.991	.226	32.0%
\$150K to \$200K	.971	1.004	.093	16.4%
\$200K to \$300K	.908	1.004	.177	26.3%
\$300K to \$500K	.906	.987	.140	21.5%
\$500K to \$750K	.862	.993	.051	7.9%
Over \$1,000K	1.002	.999	.002	0.2%
Overall	.954	1.035	.171	26.3%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRIMP	2212	7	18.9%
	2215	1	2.7%
	2220	13	35.1%
	2230	14	37.8%
	2235	1	2.7%
	3212	1	2.7%
Overall		37	100.0%
Excluded		0	
Total		37	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2212	.968	1.033	.083	12.0%
2215	1.003	1.000	.000	.
2220	.946	1.083	.180	29.0%
2230	.984	1.053	.211	31.1%
2235	.756	1.000	.000	.
3212	1.000	1.000	.000	.
Overall	.954	1.035	.171	26.3%

## Improvement Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	3	8.1%
	75 to 100	2	5.4%
	50 to 75	6	16.2%
	25 to 50	17	45.9%
	5 to 25	9	24.3%
Overall		37	100.0%
Excluded		0	
Total		37	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.783	1.018	.120	23.1%
75 to 100	.965	1.001	.012	1.7%
50 to 75	.938	1.080	.177	30.2%
25 to 50	.947	1.047	.209	29.7%
5 to 25	1.000	1.056	.129	25.0%
Overall	.954	1.035	.171	26.3%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	1	2.7%
	500 to 1,000 sf	3	8.1%
	1,000 to 1,500 sf	4	10.8%
	1,500 to 2,000 sf	3	8.1%
	2,000 to 3,000 sf	15	40.5%
	3,000 sf or Higher	11	29.7%
Overall		37	100.0%
Excluded		0	
Total		37	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.986	1.000	.000	.
500 to 1,000 sf	1.037	1.066	.180	33.8%
1,000 to 1,500 sf	.863	1.087	.215	32.0%
1,500 to 2,000 sf	.965	1.048	.268	44.4%
2,000 to 3,000 sf	.916	1.061	.185	30.6%
3,000 sf or Higher	1.000	.996	.100	14.9%
Overall	.954	1.035	.171	26.3%

## Improved Quality

### Case Processing Summary

		Count	Percent
QUALITY	Average	17	45.9%
	Fair	13	35.1%
	Fair Plus	2	5.4%
	Good	4	10.8%
	Low	1	2.7%
Overall		37	100.0%
Excluded		0	
Total		37	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.947	1.036	.194	31.1%
Fair	.977	1.025	.140	23.6%
Fair Plus	.777	1.000	.007	1.0%
Good	.893	1.006	.086	13.0%
Low	1.299	1.000	.000	.
Overall	.954	1.035	.171	26.3%

## Improved Condition

### Case Processing Summary

		Count	Percent
CONDITION	Average	32	86.5%
	Badly Worn	1	2.7%
	Fair	4	10.8%
Overall		37	100.0%
Excluded		0	
Total		37	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Average	.951	1.017	.157	24.1%
Badly Worn	1.299	1.000	.000	.
Fair	.961	1.098	.240	43.2%
Overall	.954	1.035	.171	26.3%



**Vacant Land Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	232	59.6%
	\$25K to \$50K	93	23.9%
	\$50K to \$100K	41	10.5%
	\$100K to \$150K	14	3.6%
	\$150K to \$200K	3	0.8%
	\$200K to \$300K	5	1.3%
	\$300K to \$500K	1	0.3%
Overall		389	100.0%
Excluded		0	
Total		389	

**Ratio Statistics for CURRLND / VTASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.079	1.041	.231	31.7%
\$25K to \$50K	1.030	1.000	.147	19.3%
\$50K to \$100K	1.000	.994	.101	14.7%
\$100K to \$150K	1.002	1.004	.035	8.7%
\$150K to \$200K	1.000	1.001	.167	26.7%
\$200K to \$300K	1.000	.998	.071	12.0%
\$300K to \$500K	1.042	1.000	.000	.
Overall	1.030	1.083	.197	29.1%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRLND	100	328	84.3%
	200	2	0.5%
	510	1	0.3%
	520	10	2.6%
	530	14	3.6%
	540	16	4.1%
	550	18	4.6%
	Overall		389
Excluded		0	
Total		389	

**Ratio Statistics for CURRLND / VTASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100	1.030	1.069	.205	30.0%
200	1.045	1.041	.043	6.1%
510	1.597	1.000	.000	.
520	1.102	1.001	.111	14.3%
530	1.043	1.094	.233	36.2%
540	1.043	1.026	.137	20.7%
550	1.003	1.039	.107	15.9%
Overall	1.030	1.083	.197	29.1%