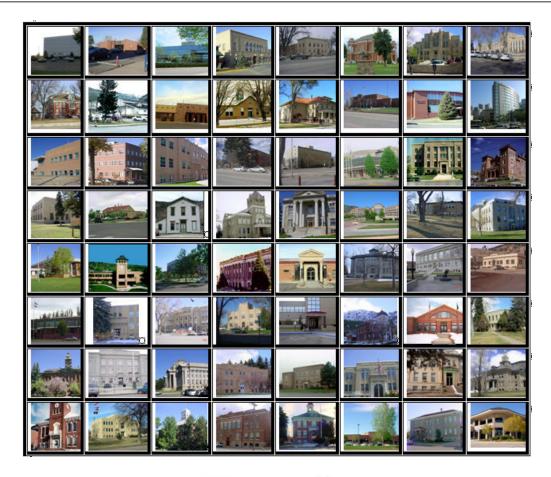


# 2013 TELLER COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2013

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

#### RE: Final Report for the 2013 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2013 Colorado Property Assessment Study.

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

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

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

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

Harry J. Dulla

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



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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 twopart 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 subdivision and discounting procedures. Valuation methodology for vacant land, improved properties commercial residential and 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.

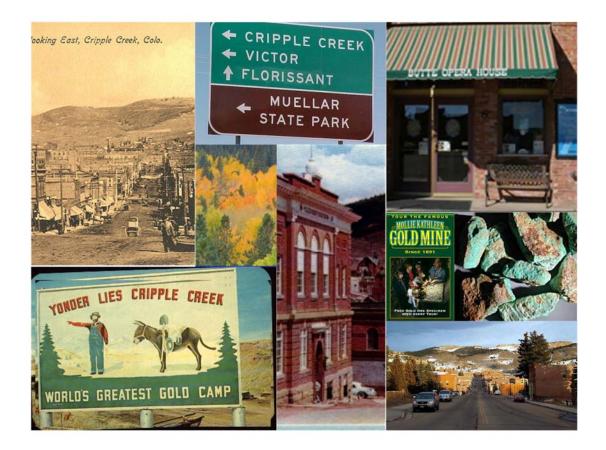
Wildrose Audit has completed the Property Assessment Study for 2013 and is pleased to report its findings for Teller County in the following report.



# 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 has a population of approximately 23,350 people with 41.92 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 13.6 percent change from the 2000 Census.

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 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 Sales were collected for each analyzed. property class over the appropriate sale period, which was typically defined as the 18-month period between January 2011 and June 2012. Counties with less than 30 sales typically extended the sale period back up to 5 years prior to June 30, 2012 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 pricerelated 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:

Teller County Ratio Grid						
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis	
Commercial/Industrial	35	0.985	1.014	20.5	Compliant	
Condominium	N/A	N/A	N/A	N/A	N/A	
Single Family	1,462	1.007	1.043	15.2	Compliant	
Vacant Land	550	0.998	1.049	20	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 methodology 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



# 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.

All qualified residential and commercial class properties were examined using the unit value method, where the actual value per square foot was compared between sold and unsold properties. A class was considered qualified if it met the criteria for the ratio analysis. The median value per square foot for both groups was compared from an appraisal and statistical perspective. If no significant difference was indicated, then we concluded that no further testing was warranted and that the county was in compliance in terms of sold/unsold consistency.

If either residential or commercial differences were significant using the unit value method, or if data limitations made the comparison invalid, then the next step was to perform a ratio analysis comparing the 2012 and 2013 actual values for each qualified class of property. All qualified vacant land classes were tested using this method. The sale property ratios were arrayed using a range of 0.8 to 1.5, which theoretically excluded changes between years that were due to other unrelated changes in the property. These ratios were also stratified at the appropriate level of analysis. Once the percent change was determined for each appropriate class and sub-class, the next step was to select the unsold sample. This sample

was at least 1% of the total population of unsold properties and excluded any sale properties. The unsold sample was filtered based on the attributes of the sold dataset to closely correlate both groups. The ratio analysis was then performed on the unsold properties and stratified. The median and mean ratio distribution was then compared between the sold and unsold group. A nonparametric test such as the Mann-Whitney test for differences between independent samples was undertaken to determine whether any observed differential was significant. If this test determined that the unsold properties were treated in a manner similar to the sold properties, it was concluded that no further testing was warranted and that the county was in compliance.

If a class or sub-class of property was determined to be significantly different by this method, the final step was to perform a multivariate mass appraisal model that developed ratio statistics from the sold properties that were then applied to the unsold sample. This test compared the measures of central tendency and confidence intervals for the sold properties with the unsold property sample. If this comparison was also determined to be significantly different, then the conclusion was that the county had treated the unsold properties in a different manner than sold properties.

These tests were supported by both tabular and chart presentations, along with saved sold and unsold sample files.



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

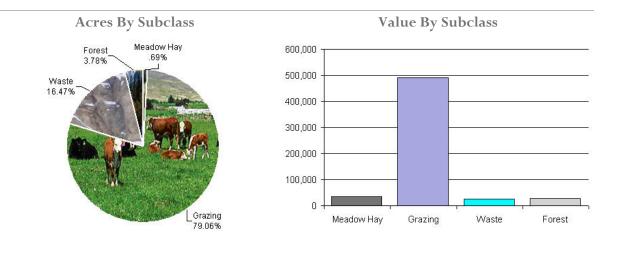
## Conclusions

## Recommendations

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



# AGRICULTURAL LAND STUDY



# 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. 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:



	Teller County Agricultural Land Ratio Grid					
Abstract Code	Land Class	Number Of Acres	County Value Per Acre 7	County Assessed Total Value	WRA Total Value	Ratio
4137	Meadow Hay	596	58.00	34,711	34,561	1.00
4147	Grazing	67,649	7.00	490,658	490,652	1.00
4177	Forest	3,231	9.00	27,869	27,866	1.00
4167	Waste	14,094	2.00	24,602	24,602	1.00
Total/Avg		85,570	7.00	577,840	577,681	1.00

Recommendations



# 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

Teller 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.

Teller County utilized the following discovery method(s):

- Questionnaires
- Phone Interviews
- In-Person Interviews
- Written Correspondence
- Grazing lease info
- Sales of Ag improved accounts

#### Conclusions

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** 



# 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)(1) 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 2013 for Teller County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 41 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.

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

If 50 percent or more of the sales are qualified, the contractor has reviewed a statistically significant sample of unqualified sales, excluding sales that were disqualified for obvious reasons. The following subclasses were analyzed for Teller County:

- 2112 Merchandising
- 2127 Limited Gaming
- 2130 Special Purpose

### Conclusions

Teller County appears to be doing an excellent 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



# 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



# 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



# VACANT LAND

#### **Subdivision Discounting**

Subdivisions were reviewed in 2013 in Teller County. The review showed that subdivisions were discounted pursuant to the Colorado Revised Statutes in Article 39-1-103 (14). Discounting procedures were applied to all subdivisions where less than 80 percent of all sites were sold using the present worth method. The market approach was applied where 80 percent or more of the subdivision sites were sold. An absorption period was estimated for each subdivision that was discounted. An appropriate discount rate was developed using the summation method. Subdivision land with structures was appraised at full market value.

#### Conclusions

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

#### Recommendations



# **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 C.R.S. Chapter 39-1-103 (17)(a)(II) 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** 



# 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 This sample was levels of such property. 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 2013 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts Best Information Available



## Conclusions

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

Recommendations



# 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



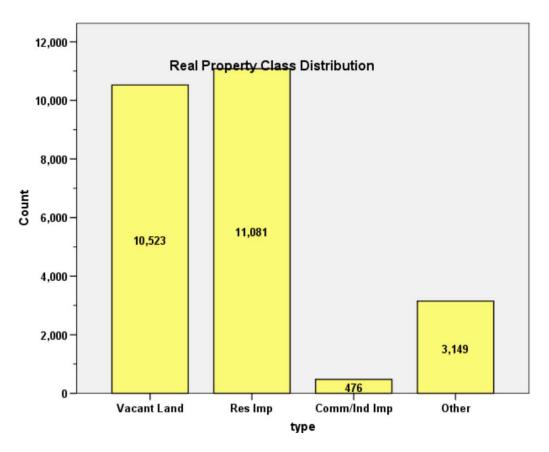
# **A P P E N D I C E S**



#### STATISTICAL COMPLIANCE REPORT FOR TELLER COUNTY 2013

#### I. OVERVIEW

Teller County is located in northwestern Colorado. The county has a total of 25,229 real property parcels, according to data submitted by the county assessor's office in 2013. 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 79.1% of all vacant land parcels.

For residential improved properties, single family properties accounted for 95.7% 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**

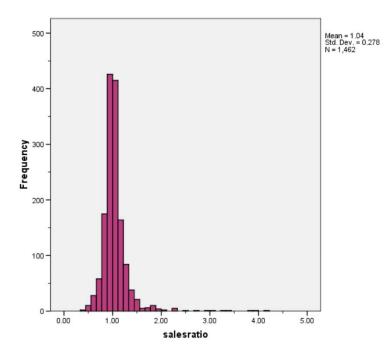
The following sales analyses were based on the requirements of the 2013 Colorado Property Assessment Study. Information was provided by the Teller Assessor's Office in 2013. The data included all 5 property record files as specified by the Auditor.

#### **III. RESIDENTIAL SALES RESULTS**

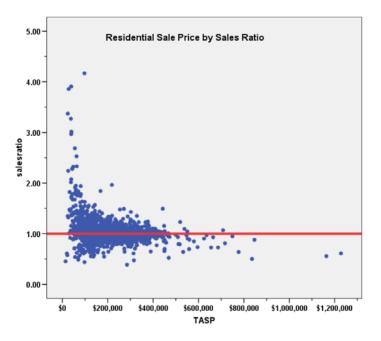
As noted, the assessor provided a separate sales file of the qualified residential sales used by the assessor to determine values; there were 1,462 qualified residential sales for the 48-month sale period prior to June 30, 2012. The sales ratio analysis results were as follows:

Median	1.007
Price Related Differential	1.043
Coefficient of Dispersion	.152

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**

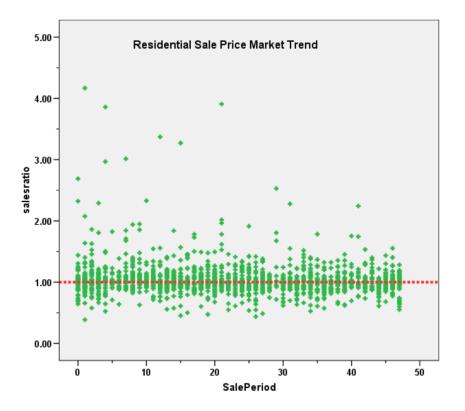
We next analyzed the residential dataset using the 18-month sale period for any residual market trending, with the following results:

Mo	odel	Unstandardized Coefficients		Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.085	.013		81.344	.000
	SalePeriod	002	.001	099	-3.796	.000

Coefficients<sup>a</sup>

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 2013 between each group, as follows:

Group	No.	Median	Mean
Unsold	9,620	\$116	\$143
Sold	1,462	\$129	\$130

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

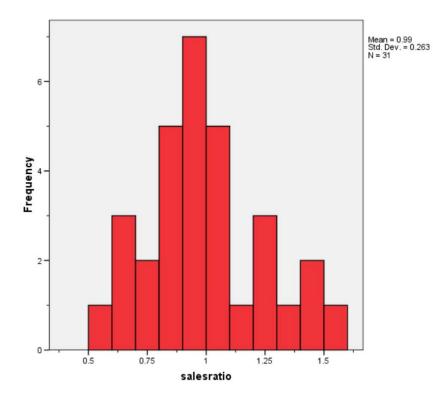


#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

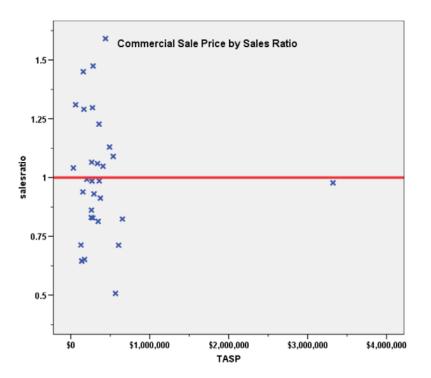
We were provided a separate sale file with sales between July 2007 and June 2012. The commercial/industrial sale file included 35 sales for this period. The sale ratios were in compliance in terms of the median ratio, but the COD was out of compliance. It was in compliance only when 5 sales (14%) of the sales were trimmed. The following table indicates the change in COD as sales with high sales ratios were trimmed from the sale set:

Commercial Sales	Med Ratio	COD	Compliance Results
35	.986	.312	OUT
34	.986	.252	OUT
33	.985	.231	OUT
32	.982	.218	OUT
31	.985	.205	IN

Based on these results, we concluded that the assessor is in compliance after **<u>significant</u>** trimming. The following histogram and scatter plot of the 31 final sales describe the sales ratio distribution further:







#### **Commercial Market Trend Analysis**

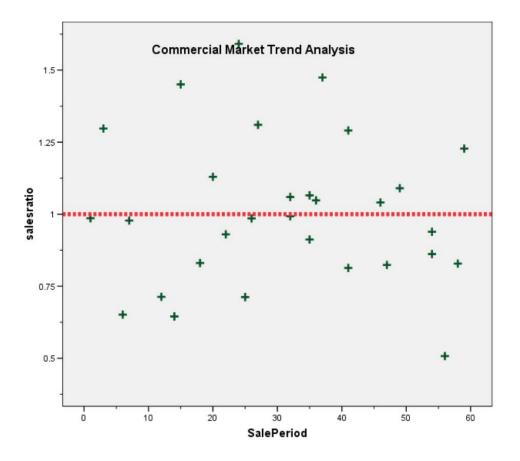
The 31 commercial/industrial sales were next analyzed by subclass for any residual market trending, examining the sale ratios across the 60-month sale period with the following results:

#### Coefficients<sup>a</sup>

Model	Ι	Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.002	.099		10.111	.000
	SalePeriod	.000	.003	017	090	.929

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 2012 to 2013 between sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows:

Group	No.	Median Chg Val	Mean Chg Val
Unsold	438	0.97	1.17
Sold	28	1.00	1.03

Based on the above results, we concluded that the Teller County assessor was valuing sold and unsold commercial properties consistently.

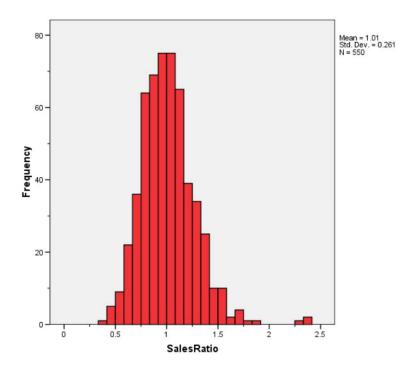


#### **V. VACANT LAND SALE RESULTS**

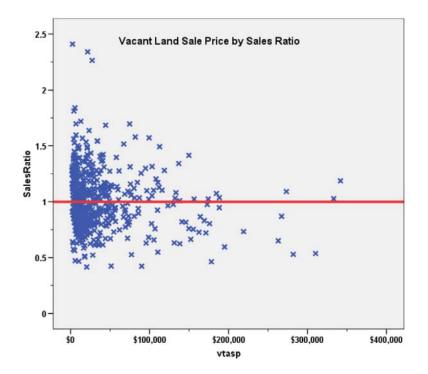
The number of qualified vacant land sales was 560 for the 60 month period prior to June 2012. We trimmed 10 sales with extreme sales ratios, for a final total of 550 qualified sales. The sales ratio analysis resulted in the following ratio statistics:

Median	0.998
Price Related Differential	1.049
Coefficient of Dispersion	.200

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:









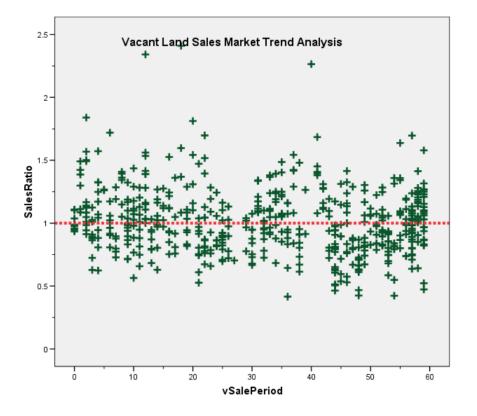
### Vacant Land Market Trend Analysis

The 550 vacant land sales were analyzed, examining the sale ratios across the 60-month sale period with the following results:

Model		Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	1.087	.022		49.487	.000
	vSalePeriod	002	.001	163	-3.868	.000

Coefficients<sup>a</sup>

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 2010 and 2013 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

SUBDIVN O	Group	N	Median	Mean
Total	Unsold	9,803	0.91	0.97
	Sold	547	0.90	0.95

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

### 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:



_	-		
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000	011		60

	ABSTR	RIMP		Statistic	Std. Error
Imp	SFR	Mean		\$90.08	\$.935
ValSF		95% Confidence Interval for	Lower Bound	\$88.25	
		Mean	Upper Bound	\$91.91	
		5% Trimmed Mean		\$87.99	
		Median		\$86.83	
		Variance		9264.604	
		Std. Deviation		\$96.253	
		Minimum		\$0	
		Maximum		\$9,092	
		Range		\$9,092	
		Interquartile Range		\$50	
		Skewness		77.462	.024
		Kurtosis		7222.404	.048
	Ag	Mean		\$98.28	\$3.059
	Res	95% Confidence Interval for	Lower Bound	\$92.23	
		Mean	Upper Bound	\$104.33	
		5% Trimmed Mean		<b>\$97</b> 39	-9
		Median		\$96.66	
		Variance		1253.754	-6
		Std. Deviation		\$35.408	
		Minimum		\$4	
		Maximum		\$215	
		Range		\$210	
		Interquartile Range		\$55	
		Skewness		.343	.209
		Kurtosis		.677	.416

## VI. CONCLUSIONS

Based on this statistical analysis, there were no significant compliance issues concluded for Teller County as of the date of this report, although the COD for the commercial/industrial sales required significant trimming.



### STATISTICAL ABSTRACT

#### **Residential**

#### Ratio Statistics for CURRTOT / TASP

	95% Confiden Me			95% Con	fidence Interval fo	or Median		95% Confiden Weighte				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
1.043	1.029	1.057	1.007	.998	1.015	95.0%	1.000	.990	1.011	1.043	.152	26.7%

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% Confiden Me			95% Con	fidence Interval fo	or Median		95% Confiden Weighte				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
.994	.898	1.091	.985	.830	1.065	97.1%	.981	.896	1.065	1.014	.205	26.5%

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.

#### <u>Vacant Land</u>

#### Ratio Statistics for CURRLND / vtasp

	95% Confiden Me			95% Con	fidence Interval fo	or Median		95% Confiden Weighte				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
1.013	.991	1.035	.988	.964	1.024	95.5%	.966	.930	1.001	1.049	.200	25.8%

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



# **Residential Median Ratio Stratification**

#### Sale Price

#### **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	5	.3%
	\$25K to \$50K	42	2.9%
	\$50K to \$100K	177	12.1%
	\$100K to \$150K	280	19.2%
	\$150K to \$200K	295	20.2%
	\$200K to \$300K	407	27.8%
	\$300K to \$500K	230	15.7%
	\$500K to \$750K	21	1.4%
	\$750K to \$1,000K	3	.2%
	Over \$1,000K	2	.1%
Overall		1462	100.0%
Excluded	I	0	
Total		1462	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	.611	.916	1.209	234.3%
\$25K to \$50K	1.404	1.021	.376	58.1%
\$50K to \$100K	1.111	1.007	.260	39.3%
\$100K to \$150K	1.040	1.004	.141	18.1%
\$150K to \$200K	.998	1.000	.105	14.4%
\$200K to \$300K	1.002	1.001	.092	13.0%
\$300K to \$500K	.975	1.000	.092	13.1%
\$500K to \$750K	.904	1.001	.128	16.4%
\$750K to \$1,000K	.640	.997	.197	30.6%
Over \$1,000K	.585	.999	.047	6.6%
Overall	1.007	1.043	.152	27.9%



# Subclass

## **Case Processing Summary**

		Count	Percent
ABSTRIMP	1212	1435	98.2%
	1215	3	.2%
	1220	4	.3%
	1230	17	1.2%
	1714	1	.1%
	2746	2	.1%
Overall		1462	100.0%
Excluded		0	
Total		1462	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
1212	1.008	1.044	.151	27.9%
1215	.875	1.044	.126	21.6%
1220	1.008	1.057	.140	22.4%
1230	.906	1.019	.131	16.0%
1714	1.965	1.000	.000	.%
2746	.902	1.026	.050	7.1%
Overall	1.007	1.043	.152	27.9%



# Improvement Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	49	3.4%
	75 to 100	11	.8%
	50 to 75	39	2.7%
	25 to 50	466	31.9%
	5 to 25	830	56.8%
	5 or Newer	67	4.6%
Overall		1462	100.0%
Excluded		0	
Total		1462	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Over 100	.857	1.077	.285	35.6%
75 to 100	.942	1.027	.228	27.0%
50 to 75	.996	1.078	.209	32.1%
25 to 50	1.013	1.042	.156	28.5%
5 to 25	1.006	1.046	.143	28.0%
5 or Newer	1.020	1.020	.096	12.8%
Overall	1.007	1.043	.152	27.9%



# Improved Area

#### **Case Processing Summary**

		Count	Percent
ImpSFRec	LE 500 sf	16	1.1%
	500 to 1,000 sf	220	15.0%
	1,000 to 1,500 sf	477	32.6%
	1,500 to 2,000 sf	433	29.6%
	2,000 to 3,000 sf	219	15.0%
	3,000 sf or Higher	97	6.6%
Overall		1462	100.0%
Excluded		0	
Total		1462	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LE 500 sf	.924	1.029	.226	30.2%
500 to 1,000 sf	1.009	1.046	.186	29.0%
1,000 to 1,500 sf	.996	1.044	.161	31.1%
1,500 to 2,000 sf	1.013	1.043	.130	24.5%
2,000 to 3,000 sf	1.023	1.047	.135	27.8%
3,000 sf or Higher	1.003	1.042	.150	23.2%
Overall	1.007	1.043	.152	27.9%



# Improved Quality

### Case Processing Summary

		Count	Percent
QUALITY	Average	575	39.3%
	Average Plus	66	4.5%
	Fair	374	25.6%
	Fair Plus	400	27.4%
	Good	9	.6%
	Low	37	2.5%
	Very Good	1	.1%
Overall		1462	100.0%
Excluded		0	
Total		1462	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	1.003	1.011	.097	14.0%
Average Plus	1.004	1.063	.161	42.2%
Fair	1.032	1.070	.234	40.5%
Fair Plus	1.003	1.018	.125	17.8%
Good	.736	1.067	.223	28.6%
Low	1.025	1.065	.350	55.9%
Very Good	.502	1.000	.000	.%
Overall	1.007	1.043	.152	27.9%



# Improved Condition

#### **Case Processing Summary**

		Count	Percent
CONDITIOn	Average	1186	81.1%
	Badly Worn	22	1.5%
	Fair	204	14.0%
	Good	49	3.4%
	Worn Out	1	.1%
Overall		1462	100.0%
Excluded		0	
Total		1462	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	1.001	1.036	.134	25.2%
Badly Worn	1.070	1.000	.303	38.0%
Fair	1.070	1.062	.228	37.7%
Good	1.012	1.009	.102	13.5%
Worn Out	.454	1.000	.000	.%
Overall	1.007	1.043	.152	27.9%



# **Commercial Median Ratio Stratification**

# Sale Price

### **Case Processing Summary**

		Count	Percent
SPRec	\$25K to \$50K	1	3.2%
	\$50K to \$100K	1	3.2%
	\$100K to \$150K	3	9.7%
	\$150K to \$200K	4	12.9%
	\$200K to \$300K	9	29.0%
	\$300K to \$500K	8	25.8%
	\$500K to \$750K	4	12.9%
	Over \$1,000K	1	3.2%
Overall		31	100.0%
Excluded	1	0	
Total		31	

Group			Coefficient of Variation	
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
\$25K to \$50K	1.041	1.000	.000	.%
\$50K to \$100K	1.310	1.000	.000	.%
\$100K to \$150K	.645	1.002	.035	7.5%
\$150K to \$200K	1.115	1.007	.258	32.3%
\$200K to \$300K	.985	.996	.156	23.0%
\$300K to \$500K	1.054	.988	.148	22.9%
\$500K to \$750K	.768	1.004	.226	31.7%
Over \$1,000K	.978	1.000	.000	.%
Overall	.985	1.014	.205	26.7%



# Subclass

#### **Case Processing Summary**

		Count	Percent
ABSTRIMP	2212	7	22.6%
	2215	1	3.2%
	2216	1	3.2%
	2220	7	22.6%
	2225	1	3.2%
	2230	10	32.3%
	2235	2	6.5%
	2245	2	6.5%
Overall		31	100.0%
Excluded		0	
Total		31	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
2212	.939	.992	.214	33.9%
2215	.978	1.000	.000	.%
2216	.824	1.000	.000	.%
2220	1.228	1.042	.170	24.1%
2225	1.310	1.000	.000	.%
2230	.908	1.025	.167	21.0%
2235	1.085	.965	.041	5.8%
2245	.645	1.000	.000	.0%
Overall	.985	1.014	.205	26.7%



# Improvement Age

## **Case Processing Summary**

		Count	Percent
AgeRec	Over 100	5	16.1%
	75 to 100	2	6.5%
	50 to 75	6	19.4%
	25 to 50	9	29.0%
	5 to 25	9	29.0%
Overall		31	100.0%
Excluded		0	
Total		31	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Over 100	1.041	1.012	.090	14.0%
75 to 100	1.144	1.030	.289	40.9%
50 to 75	.980	1.130	.313	37.3%
25 to 50	.986	.982	.132	19.5%
5 to 25	.828	.957	.254	38.3%
Overall	.985	1.014	.205	26.7%



# Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	500 to 1,000 sf	1	3.2%
	1,000 to 1,500 sf	4	12.9%
	1,500 to 2,000 sf	2	6.5%
	2,000 to 3,000 sf	12	38.7%
	3,000 sf or Higher	12	38.7%
Overall		31	100.0%
Excluded		0	
Total		31	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
500 to 1,000 sf	.713	1.000	.000	.%
1,000 to 1,500 sf	1.124	1.070	.220	26.3%
1,500 to 2,000 sf	.757	.973	.139	19.7%
2,000 to 3,000 sf	.989	1.024	.185	27.5%
3,000 sf or Higher	1.009	1.003	.194	25.3%
Overall	.985	1.014	.205	26.7%



# Improved Quality

#### **Case Processing Summary**

		Count	Percent
QUALITY	Average	12	38.7%
	Fair	11	35.5%
	Fair Plus	3	9.7%
	Good	3	9.7%
	Low	2	6.5%
Overall		31	100.0%
Excluded		0	
Total		31	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	.982	.983	.243	32.4%
Fair	.939	1.073	.222	29.6%
Fair Plus	.930	1.040	.165	28.4%
Good	.985	1.057	.118	20.3%
Low	1.085	.965	.041	5.8%
Overall	.985	1.014	.205	26.7%



# Improved Condition

### **Case Processing Summary**

		Count	Percent
CONDITIOn	Average	24	77.4%
	Badly Worn	1	3.2%
	Fair	4	12.9%
	Worn Out	2	6.5%
Overall		31	100.0%
Excluded		0	
Total		31	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
Average	.958	.994	.193	26.1%
Badly Worn	1.451	1.000	.000	.%
Fair	.881	1.174	.323	40.4%
Worn Out	1.085	.965	.041	5.8%
Overall	.985	1.014	.205	26.7%



# Vacant Land Median Ratio Stratification

# Sale Price

## Case Processing Summary

		Count	Percent
SPRec	LT \$25K	326	59.3%
	\$25K to \$50K	116	21.1%
	\$50K to \$100K	59	10.7%
	\$100K to \$150K	26	4.7%
	\$150K to \$200K	15	2.7%
	\$200K to \$300K	5	.9%
	\$300K to \$500K	3	.5%
Overall		550	100.0%
Excluded	1	0	
Total		550	

### Ratio Statistics for CURRLND / vtasp

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	.995	1.024	.201	26.9%
\$25K to \$50K	1.020	1.000	.182	24.5%
\$50K to \$100K	.946	.992	.208	28.0%
\$100K to \$150K	1.020	1.003	.205	25.3%
\$150K to \$200K	.832	.998	.178	21.8%
\$200K to \$300K	.733	.999	.213	30.1%
\$300K to \$500K	1.027	.988	.211	35.5%
Overall	.988	1.049	.200	26.6%



# Subclass

### **Case Processing Summary**

		Count	Percent
ABSTRLND	100	450	81.8%
	200	5	.9%
	510	1	.2%
	520	18	3.3%
	530	22	4.0%
	540	29	5.3%
	550	25	4.5%
Overall		550	100.0%
Excluded		0	
Total		550	

#### Ratio Statistics for CURRLND / vtasp

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
100	.995	1.039	.198	26.6%
200	1.009	.975	.327	46.7%
510	1.075	1.000	.000	.%
520	.935	1.149	.254	32.0%
530	1.034	1.037	.191	22.1%
540	.944	1.022	.168	22.2%
550	.964	1.018	.197	24.8%
Overall	.988	1.049	.200	26.6%