



2016

# SUMMIT COUNTY PROPERTY ASSESSMENT STUDY

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**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 style.

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

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# INTRODUCTION

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## 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.

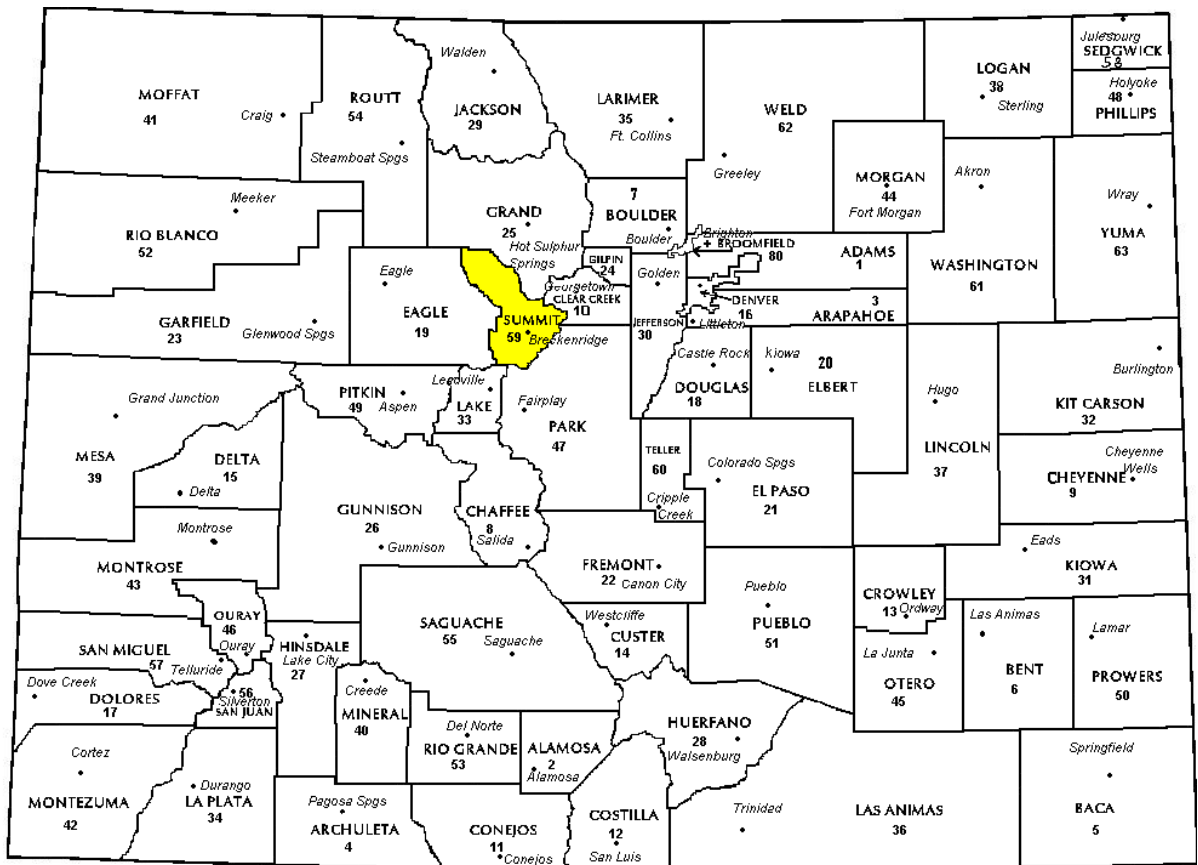
Wildrose Audit has completed the Property Assessment Study for 2016 and is pleased to report its findings for Summit County in the following report.

# REGIONAL/HISTORICAL SKETCH OF SUMMIT COUNTY

## Regional Information

Summit County is located in the Western Slope region of Colorado. The Western Slope of Colorado refers to the region west of the Rocky Mountains. It includes Archuleta, Delta, Dolores, Eagle, Garfield, Grand,

Gunnison, Hinsdale, Jackson, La Plata, Mesa, Moffat, Montezuma, Montrose, Ouray, Pitkin, Rio Blanco, Routt, San Juan, San Miguel, and Summit counties.





## Historical Information

Summit County had an estimated population of approximately 29,404 people with 46 people per square mile, according to the U.S. Census Bureau's 2014 estimated census data. This represents a 5 percent change from April 1, 2010 to July 1, 2014.

Summit County was organized as one of the seventeen original Colorado counties by the First Territorial Legislature on November 1, 1861. It was named for the many mountain summits in the county. Until February 2, 1874, its boundaries included the area now comprising Summit County, Grand County, Routt County, Moffat County, Garfield County, Eagle County, and Rio Blanco County.

In 1874, the northern half of the original Summit County was split off to form Grand County. With the creation of Garfield and Eagle counties in 1883, Summit County arrived at its present boundaries.

Established in 1859, the historic Town of Breckenridge is a Home Rule Municipality and is the county seat. The town of Breckenridge was formally created in November 1859 by General George E. Spencer. Spencer chose the name "Breckinridge" after the United States' Vice President of the time, John C. Breckinridge of Kentucky in the hopes of

flattering the government and gaining a post office. Spencer succeeded in his plan and a post office was built in Breckenridge. When the Civil War broke out in 1861, however, the former vice president sided with the Confederates (as a brigadier general) and the pro-Union citizens of Breckenridge decided to change the town's name. The first "i" was changed to an "e" and the town's name has been spelled Breckenridge ever since.

Prospectors entered what is now Summit County (then part of Utah Territory) during the Pikes Peak Gold Rush of 1859 and soon after that, the placer gold discoveries farther east at Idaho Springs. Breckenridge was founded to serve the miners working rich placer gold deposits discovered along Georgia Gulch. Placer gold mining was soon joined by hard rock mining, as prospectors followed the gold to its source veins in the hills.

Summit county is rich in activities for locals and visitors. It is home to Copper Mountain, Breckenridge, Keystone and Arapahoe Ski Resorts. Winter activities include skiing, snowboarding, ice-skating, cross-country skiing, dog sleigh, and snowmobiling. Summer activities include hiking, biking, fishing, and trail running.

*(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 Summit County are:

<b>Summit 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	92	1.000	1.202	12	Compliant
Condominium	1,589	1.000	1.008	4.7	Compliant
Single Family	1,448	1.000	1.008	4.2	Compliant
Vacant Land	372	1.000	1.042	18.6	Compliant

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

Summit 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	Compliant
Single Family	Compliant
Vacant Land	Compliant

**Conclusions**

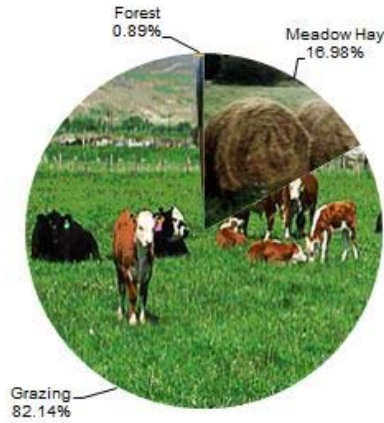
After applying the above described methodologies, it is concluded that Summit County is reasonably treating its sold and unsold properties in the same manner.

**Recommendations**

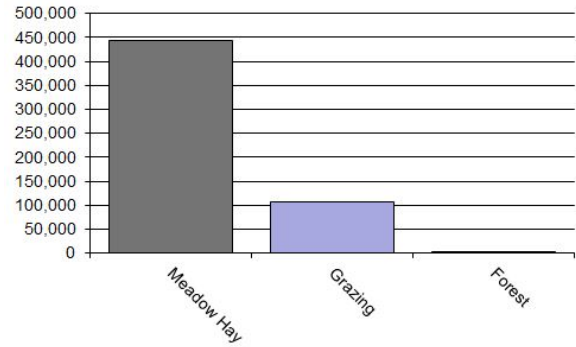
None

# 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>Summit 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	4,956	89.70	444,518	444,518	1.00
4147	Grazing	23,977	4.43	106,189	106,189	1.00
4177	Forest	259	2.75	711	711	1.00
<b>Total/Avg</b>		<b>29,191</b>	<b>18.89</b>	<b>551,418</b>	<b>551,418</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**

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

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## Agricultural Land Under Improvements

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### 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

Summit County has used the following methods to discover land under a residential improvement on a farm or ranch that is determined to be not integral under 39-1-102, C.R.S.:

- Questionnaires
- Field Inspections
- Phone Interviews
- In-Person Interviews with Owners/Tenants

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

Summit 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.:

- Aerial Photography/Pictometry

Summit 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 Summit County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 30 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**

Summit 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**

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

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## Earth and Stone Products

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### Methodology

Under the guidelines of the Assessor's Reference Library (ARL), Volume 3, Natural Resource Valuation Procedures, the income approach was applied to determine value for production of earth and stone products. The number of tons was multiplied by an economic royalty rate determined by the Division of Property Taxation to determine income. The income was multiplied by a recommended Hoskold factor to determine the actual value. The Hoskold factor is determined by the life of the reserves or the lease. Value is based on two

variables: life and tonnage. The operator determines these since there is no other means to obtain production data through any state or private agency.

### Conclusions

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

### Recommendations

None

## VACANT LAND

### **Subdivision Discounting**

Subdivisions were reviewed in 2016 in Summit 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**

Summit 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.

Summit County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural, commercial

and ski area 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

Summit 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

Summit 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.

Summit 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
- 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
- Town & County Business Reports

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.

Summit 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:

- Businesses in a selected area
- 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 close to the \$7,300 actual value exemption status
- Lowest or highest quartile of value per square foot
- Accounts protested with substantial disagreement

### **Conclusions**

Summit 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*

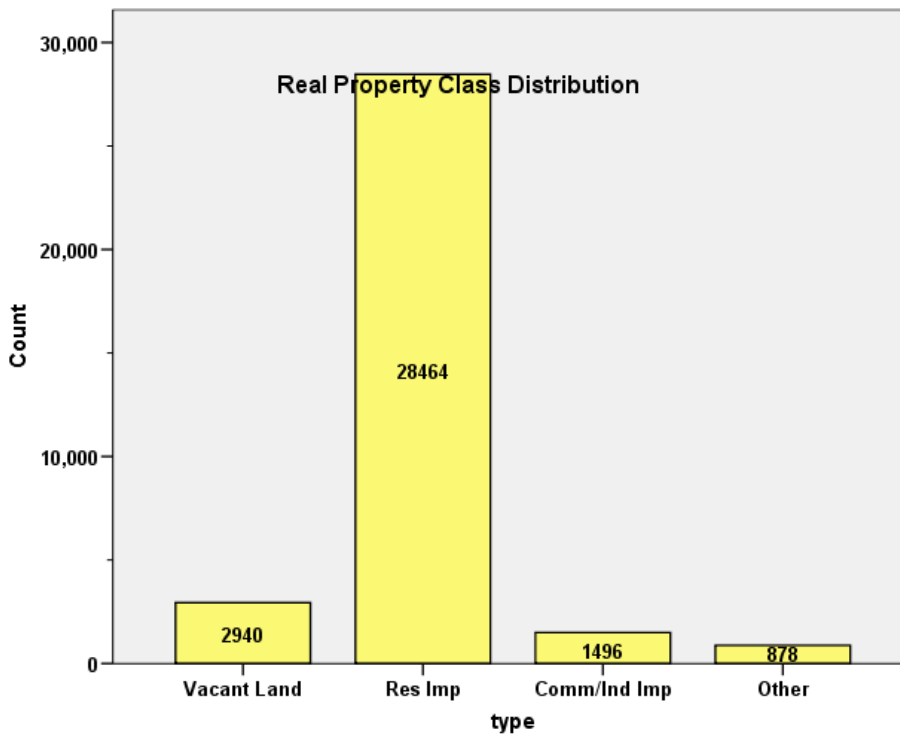
# APPENDICES



**STATISTICAL COMPLIANCE RESULTS**  
**FOR SUMMIT COUNTY**  
**2016**

**I. OVERVIEW**

Summit County is located in central Colorado. The county has a total of 33,778 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 46.7% of all vacant land parcels.

For residential improved properties, single family properties accounted for 30.7% of all residential properties. Residential condominiums, coded as 1230, accounted for 46.0% of all residential properties. Based on the guidelines of the 2016 audit, we will analyze residential condominiums separately in the following analysis.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 4.4% 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 Summit Assessor's Office in May 2016. The data included all 5 property record files as specified by the Auditor.

## III. RESIDENTIAL SALES RESULTS

There were 3,037 qualified residential sales for the 24-month sale period ending June 30, 2016. We stratified our sales ratio analysis by residential non-condominiums and condominiums, as follows:

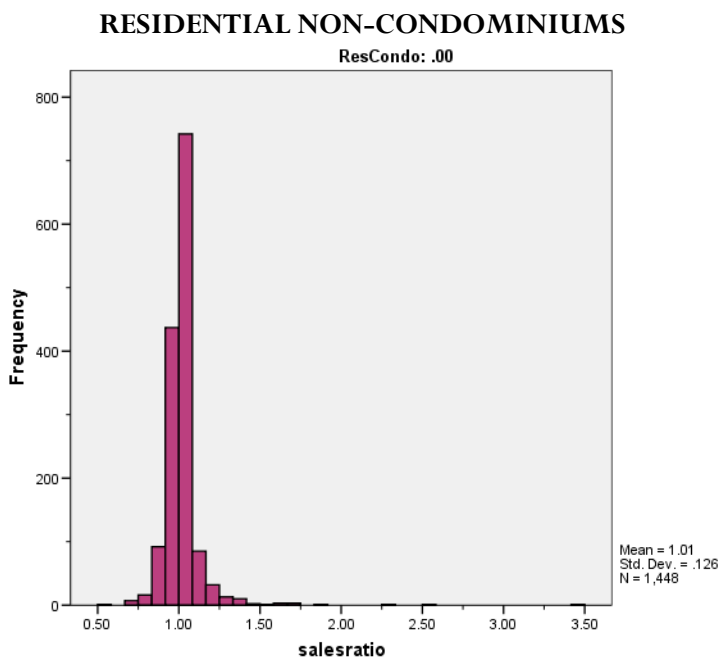
### Residential Non-Condo = 1,448

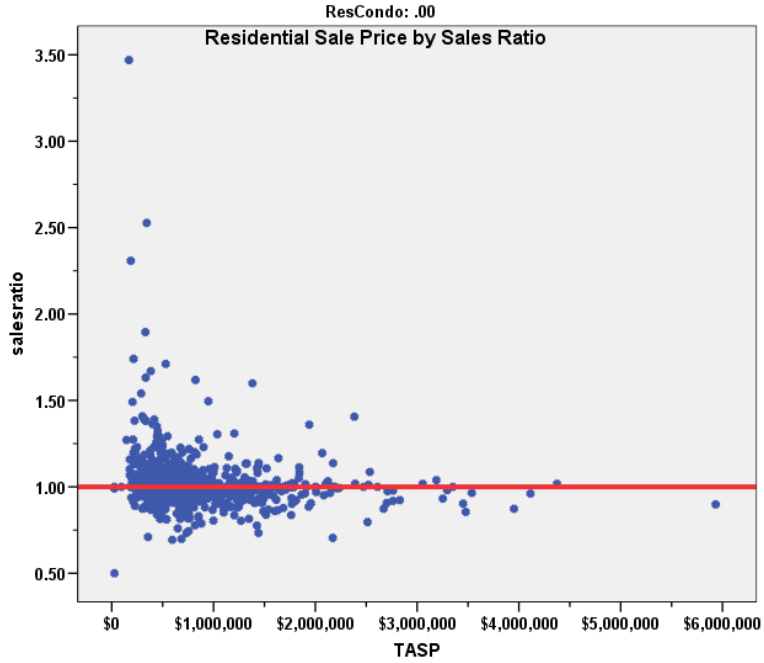
Median	1.000
Price Related Differential	1.008
Coefficient of Dispersion	4.2

### Residential Condo = 1,589

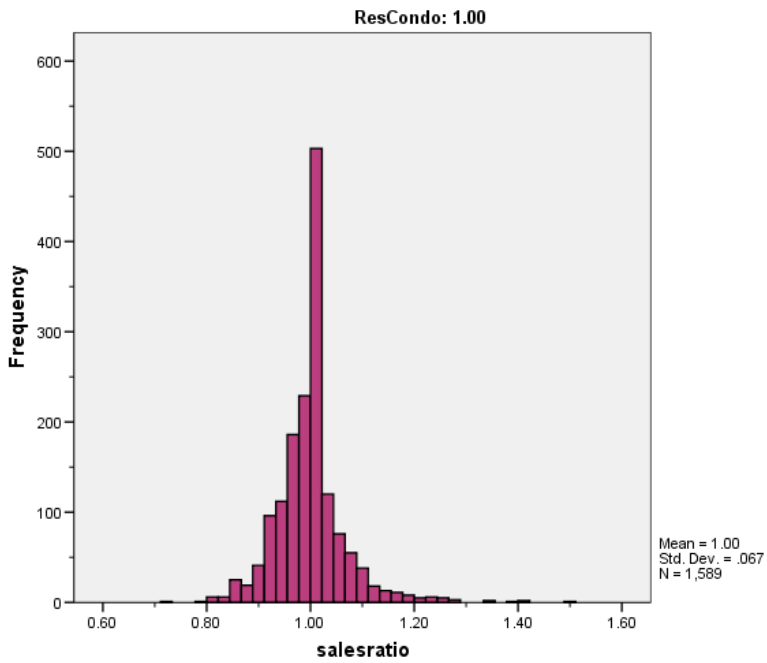
Median	1.000
Price Related Differential	1.008
Coefficient of Dispersion	4.7

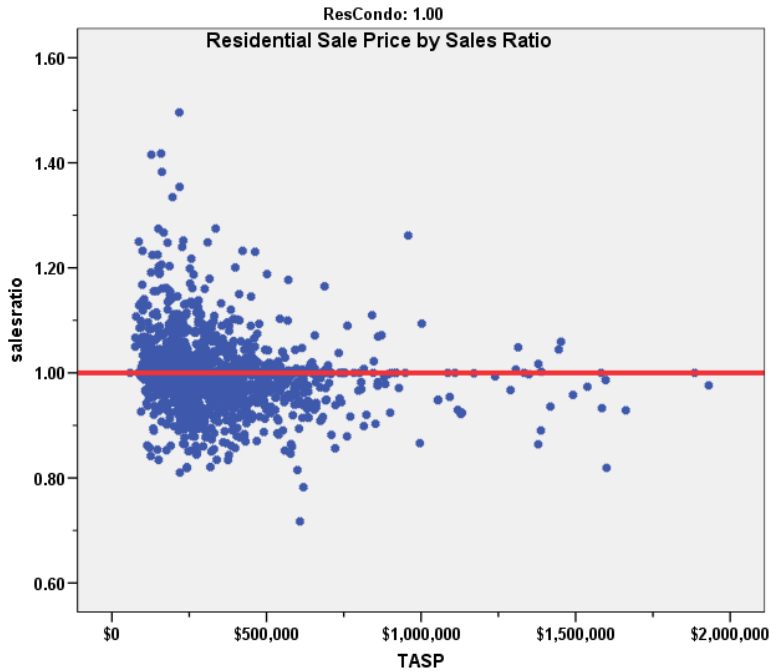
The above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. The following graphs describe further the sales ratio distribution for these properties:





**RESIDENTIAL CONDOMINIUMS**





The above graphs indicate that the distribution of the sale ratios was within state mandated limits. No sales were trimmed.

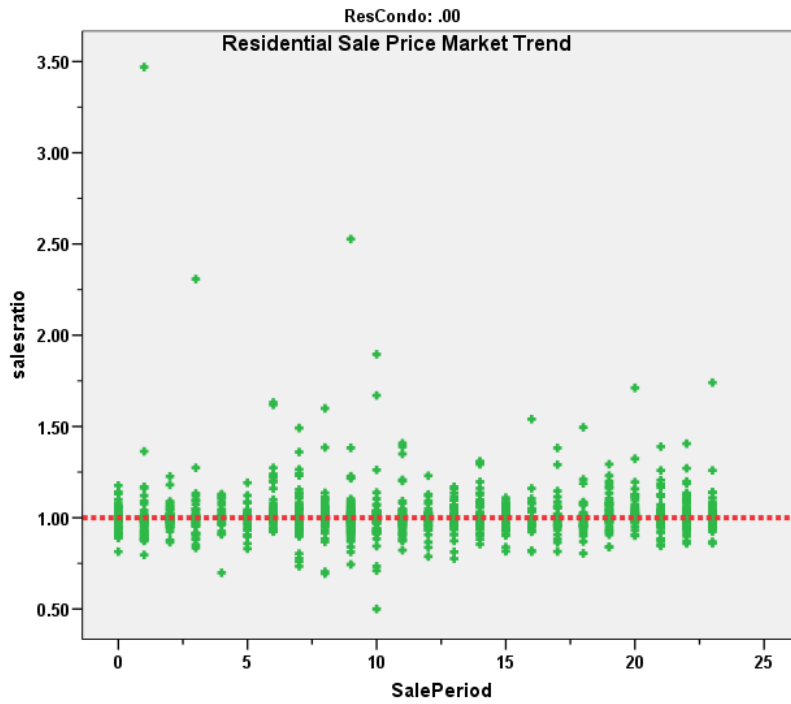
### Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period for any residual market trending. We again stratified the analysis between residential non-condominiums and condominiums, with the following results:

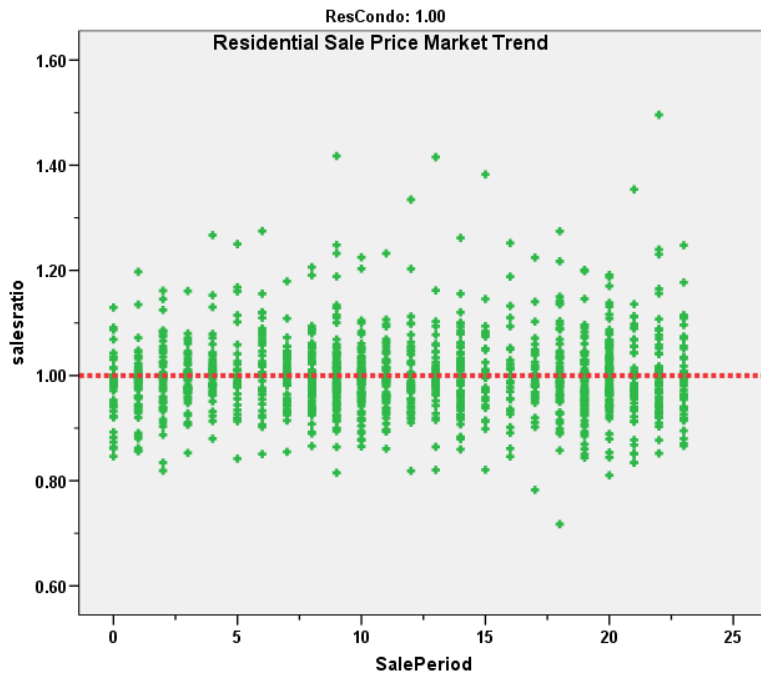
ResCondo	Model		Unstandardized Coefficients		Standardized	t	Sig.
			B	Std. Error	Coefficients		
					Beta		
.00	1	(Constant)	1.008	.007		154.033	.000
		SalePeriod	.000	.000	.022	.832	.405
1.00	1	(Constant)	.996	.003		304.559	.000
		SalePeriod	.000	.000	.024	.941	.347

a. Dependent Variable: salesratio

### RESIDENTIAL Non-CONDOMINIUMS



### RESIDENTIAL CONDOMINIUMS



Both models indicated that there was no residual market trending in the sale data for either group. We concluded that the assessor has adequately addressed market trending in the valuation of residential properties for both condominiums and non-condominium 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 stratified by residential non-condominiums and condominiums, as follows:

**Report**

ValSF				
ResCondo	sold	N	Median	Mean
.00	UNSOLD	13,683	\$332.09	\$368.54
	SOLD	1,444	\$341.53	\$384.81
1.00	UNSOLD	11,515	\$317.78	\$342.19
	SOLD	1,589	\$333.26	\$358.17

**ResCondo = .00**

**Hypothesis Test Summary**

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

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

**ResCondo = 1.00**

**Hypothesis Test Summary**

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

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

Given that there was a significant difference between sold and unsold residential properties, we next compared the median change in value from 2014 to 2016 between sold and unsold residential properties, broken down by condominiums and non-condominiums:

**Report**

DIFF	ResCondo	Category	N	Median	Mean
.00		UNSOLD	13529	1.076	1.095
		SOLD	1445	1.094	1.116
1.00		UNSOLD	11389	1.051	1.058
		SOLD	1589	1.064	1.078

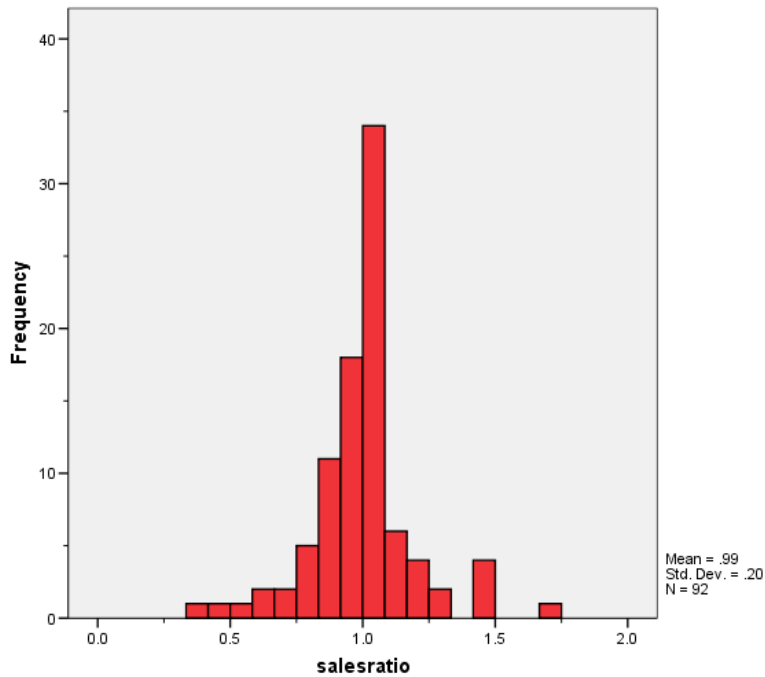
The above results indicate that sold and unsold residential properties were valued in a consistent manner.

#### IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

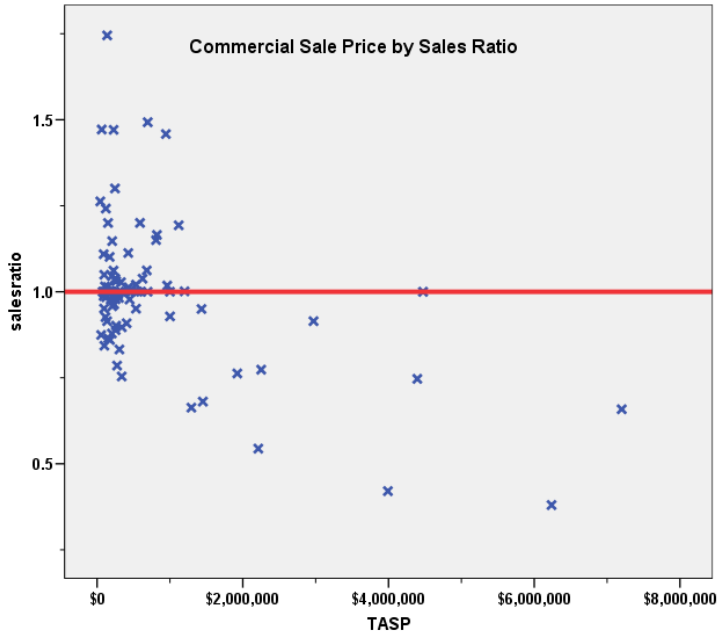
There were 92 qualified commercial and industrial sales for the 60 month sale period ending June 30, 2014. The sales ratio analysis results were as follows:

Median	<b>1.000</b>
Price Related Differential	<b>1.202</b>
Coefficient of Dispersion	<b>12.0</b>

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





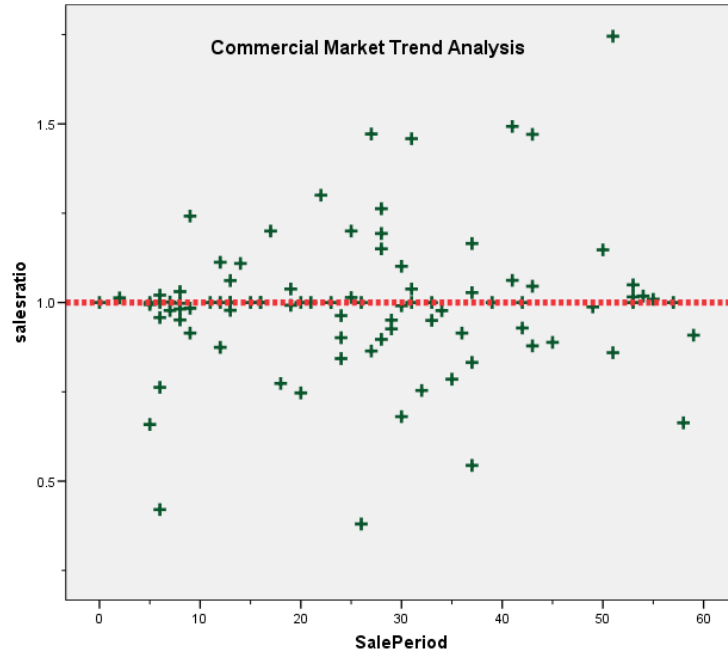


### Commercial Market Trend Analysis

The 92 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)	.956	.041	23.439	.000
	SalePeriod	.001	.001	.116	1.112

a. Dependent Variable: salesratio



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

**Sold/Unsold Analysis**

For the sold/unsold analysis of commercial properties, we compared the median actual value per square foot between sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows:

**Report**

ValSF			
sale	N	Median	Mean
UNSOLD	1,392	\$173.82	\$199.61
SOLD	92	\$174.53	\$204.71

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
<b>1</b>	The distribution of ValSF is the same across categories of sold.	Independent-Samples Mann-Whitney U Test	.115	Retain the null hypothesis.

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

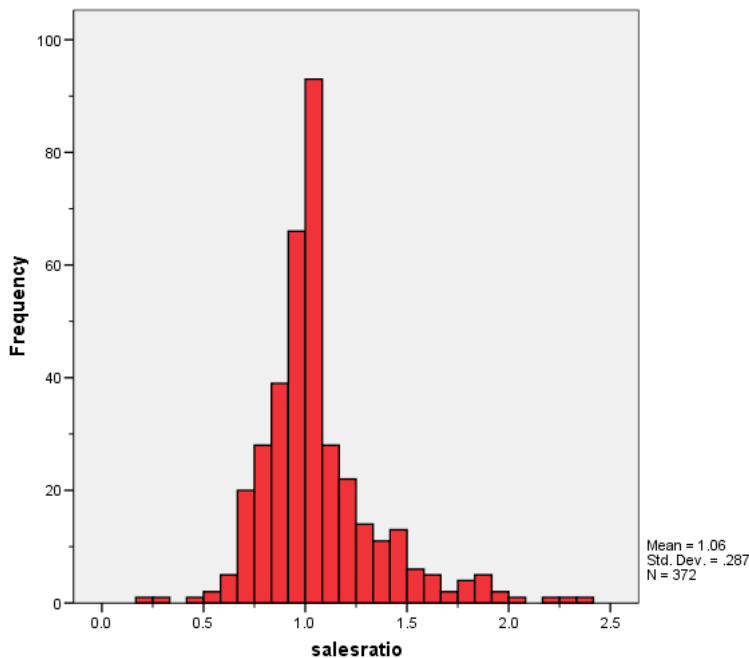
Based on the results of these comparisons, we concluded that the Summit County assessor was valuing sold and unsold commercial properties consistently.

#### V. VACANT LAND SALE RESULTS

There were 378 qualified vacant land sales for the 36-month sale period ending June 30, 2016; 6 sales were trimmed based on their extreme ratio values, resulting in a final count of 372 vacant land sales. The sales ratio analysis results were as follows:

Median	<b>1.000</b>
Price Related Differential	<b>1.042</b>
Coefficient of Dispersion	<b>18.6</b>

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



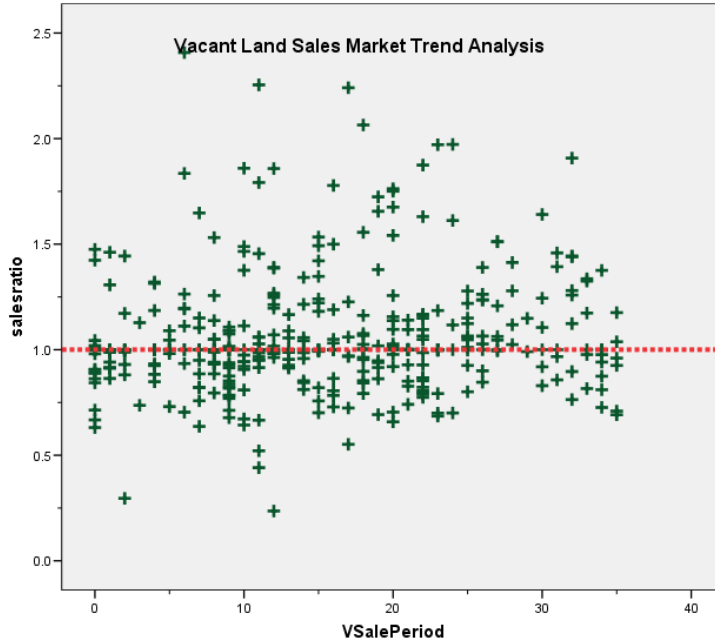


### Vacant Land Market Trend Analysis

The vacant land sales were next analyzed for residual market trending, examining the sale ratios across the 36 month sale period with the following results:

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	1.009	.028		35.655	.000
	VSalePeriod	.003	.002	.110	2.128	.034

a. Dependent Variable: salesratio



The market trend results indicated no statistically significant trend. We concluded that the assessor has adequately considered market tending in Summit County’s vacant land valuation for 2016.

### 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			
sold	N	Median	Mean
UNSOLD	2,631	1.092	1.483
SOLD	372	1.209	1.287

#### 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	.000	Reject the null hypothesis.

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

Because of the difference between sold and unsold at the class level, we next stratified this analysis by subdivision with at least 5 sales, which indicated that there was no pattern of the change in value being greater for sold properties than unsold properties, as follows:

### Report

DIFF				
SUBDIVNO	sold	N	Median	Mean
1170	UNSOLD	6	1.372	1.261
	SOLD	5	1.495	1.458
1216	UNSOLD	16	1.235	1.245
	SOLD	7	1.312	1.324
1220	UNSOLD	175	1.080	1.010
	SOLD	13	1.083	1.089
1299	UNSOLD	19	1.080	1.081
	SOLD	11	1.342	1.388
1613	UNSOLD	294	1.080	1.175
	SOLD	77	1.152	1.194
1785	UNSOLD	36	1.462	1.565
	SOLD	5	1.287	1.421
2018	UNSOLD	25	1.200	1.219
	SOLD	11	1.102	1.087
2032	UNSOLD	8	1.032	1.017
	SOLD	7	1.325	1.230
2070	UNSOLD	27	1.596	1.639
	SOLD	8	1.315	1.402
2109	UNSOLD	6	1.083	1.189
	SOLD	6	.849	1.036
2208	UNSOLD	23	1.471	6.091
	SOLD	9	1.457	1.480
406	UNSOLD	95	1.136	1.320
	SOLD	17	1.291	1.412
651	UNSOLD	49	1.100	1.212
	SOLD	14	1.318	1.335
9000	UNSOLD	231	1.080	1.376
	SOLD	10	1.406	1.529

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 Summit 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	8,742	\$223.96	\$250.06
4277	8	\$217.96	\$245.19

### 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	.907	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 Summit County as of the date of this report.

## STATISTICAL ABSTRACT

### Residential

ResCondo	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			
.00	1.013	1.006	1.019	1.000	1.000	1.000	95.1%	1.001	.995	1.007	1.012	.053	12.4%
1.00	.998	.995	1.002	1.000	1.000	1.000	95.5%	.991	.987	.995	1.008	.042	6.7%

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

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			
.995	.953	1.036	1.000	.991	1.000	95.3%	.827	.713	.941	1.202	.120	20.1%

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

### Vacant Land

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			
1.060	1.031	1.089	1.000	1.000	1.000	95.7%	1.018	.977	1.058	1.042	.186	27.1%

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



**Residential Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	1	0.0%
	\$25K to \$50K	3	0.1%
	\$50K to \$100K	34	1.1%
	\$100K to \$150K	119	3.9%
	\$150K to \$200K	192	6.3%
	\$200K to \$300K	624	20.5%
	\$300K to \$500K	973	32.0%
	\$500K to \$750K	591	19.5%
	\$750K to \$1,000K	229	7.5%
	Over \$1,000K	271	8.9%
Overall		3037	100.0%
Excluded		0	
Total		3037	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.000	1.000	.000	.
\$25K to \$50K	.990	1.004	.167	35.0%
\$50K to \$100K	1.026	1.000	.053	7.4%
\$100K to \$150K	1.000	.999	.051	8.6%
\$150K to \$200K	1.000	1.000	.069	21.9%
\$200K to \$300K	1.000	1.001	.044	7.9%
\$300K to \$500K	1.000	1.000	.045	9.6%
\$500K to \$750K	1.000	1.001	.041	7.1%
\$750K to \$1,000K	1.000	1.000	.046	8.7%
Over \$1,000K	1.000	1.003	.053	9.1%
Overall	1.000	1.008	.047	10.0%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRIMP	1212	857	28.2%
	1213	157	5.2%
	1214	332	10.9%
	1217	48	1.6%
	1218	28	0.9%
	1219	19	0.6%
	1229	4	0.1%
	1230	1589	52.3%
	1234	1	0.0%
	1246	1	0.0%
	1713	1	0.0%
	Overall		3037
Excluded		0	
Total		3037	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212	1.000	1.017	.066	15.6%
1213	1.000	1.007	.036	6.1%
1214	1.000	1.003	.029	5.0%
1217	1.000	1.004	.030	7.0%
1218	1.000	1.002	.020	3.1%
1219	1.000	.980	.066	14.2%
1229	.993	1.004	.127	28.7%
1230	1.000	1.008	.042	6.7%
1234	1.274	1.000	.000	.
1246	1.014	1.000	.000	.
1713	.837	1.000	.000	.
Overall	1.000	1.008	.047	10.0%

## Age

### Case Processing Summary

		Count	Percent
AgeRec	Over 100	3	0.1%
	75 to 100	4	0.1%
	50 to 75	26	0.9%
	25 to 50	1413	46.5%
	5 to 25	1423	46.9%
	5 or Newer	168	5.5%
Overall		3037	100.0%
Excluded		0	
Total		3037	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	1.045	1.006	.015	3.1%
75 to 100	1.000	1.000	.001	0.3%
50 to 75	1.000	1.023	.073	10.2%
25 to 50	1.000	1.008	.053	11.6%
5 to 25	1.000	1.006	.043	7.7%
5 or Newer	1.000	1.008	.031	12.4%
Overall	1.000	1.008	.047	10.0%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	163	5.4%
	500 to 1,000 sf	894	29.4%
	1,000 to 1,500 sf	1029	33.9%
	1,500 to 2,000 sf	457	15.0%
	2,000 to 3,000 sf	345	11.4%
	3,000 sf or Higher	149	4.9%
Overall		3037	100.0%
Excluded		0	
Total		3037	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	1.000	1.002	.046	7.8%
500 to 1,000 sf	1.000	1.005	.042	6.8%
1,000 to 1,500 sf	1.000	1.008	.043	7.8%
1,500 to 2,000 sf	1.000	1.008	.044	7.6%
2,000 to 3,000 sf	1.000	1.016	.060	14.2%
3,000 sf or Higher	1.000	1.035	.090	25.1%
Overall	1.000	1.008	.047	10.0%

## Improvement Quality

### Case Processing Summary

		Count	Percent
QUALITY	A	11	0.4%
	B	126	4.1%
	C	705	23.2%
	D	2130	70.1%
	E	62	2.0%
	F	1	0.0%
	X	2	0.1%
Overall		3037	100.0%
Excluded		0	
Total		3037	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
A	1.000	1.017	.089	14.9%
B	1.000	1.004	.052	9.3%
C	1.000	1.006	.041	7.6%
D	1.000	1.006	.047	9.3%
E	1.000	1.016	.088	32.6%
F	1.000	1.000	.000	.
X	.958	1.010	.062	8.8%
Overall	1.000	1.008	.047	10.0%

## Improvement Condition

### Case Processing Summary

		Count	Percent
CONDITION	D	3024	99.6%
	E	13	0.4%
Overall		3037	100.0%
Excluded		0	
Total		3037	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
D	1.000	1.008	.047	10.0%
E	1.007	1.001	.068	12.5%
Overall	1.000	1.008	.047	10.0%

**Commercial Median Ratio Stratification**

**Sale Price**

**Case Processing Summary**

		Count	Percent
SPRec	\$25K to \$50K	1	1.1%
	\$50K to \$100K	10	10.9%
	\$100K to \$150K	9	9.8%
	\$150K to \$200K	11	12.0%
	\$200K to \$300K	19	20.7%
	\$300K to \$500K	13	14.1%
	\$500K to \$750K	9	9.8%
	\$750K to \$1,000K	5	5.4%
	Over \$1,000K	15	16.3%
Overall		92	100.0%
Excluded		0	
Total		92	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
\$25K to \$50K	1.263	1.000	.000	.
\$50K to \$100K	1.000	1.010	.097	17.6%
\$100K to \$150K	1.014	.991	.152	27.9%
\$150K to \$200K	1.000	.999	.037	7.0%
\$200K to \$300K	.992	1.004	.094	15.7%
\$300K to \$500K	1.000	.994	.061	10.1%
\$500K to \$750K	1.021	.993	.092	17.8%
\$750K to \$1,000K	1.150	1.002	.105	16.0%
Over \$1,000K	.763	1.101	.233	29.8%
Overall	1.000	1.202	.120	20.0%

## Subclass

### Case Processing Summary

		Count	Percent
ABSTRIMP	1230	1	1.1%
	1741	3	3.3%
	1745	1	1.1%
	1750	3	3.3%
	1758	1	1.1%
	2212	7	7.6%
	2215	3	3.3%
	2220	1	1.1%
	2230	7	7.6%
	2235	4	4.3%
	2245	61	66.3%
Overall		92	100.0%
Excluded		0	
Total		92	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1230	1.745	1.000	.000	.
1741	1.013	1.102	.087	16.8%
1745	1.000	1.000	.000	.
1750	1.062	1.061	.158	27.4%
1758	1.030	1.000	.000	.
2212	1.000	1.177	.238	32.0%
2215	.659	1.202	.391	62.8%
2220	.915	1.000	.000	.
2230	.950	1.185	.195	31.4%
2235	1.009	1.063	.111	19.7%
2245	1.000	1.014	.078	13.2%
Overall	1.000	1.202	.120	20.0%



Age

**Case Processing Summary**

		Count	Percent
AgeRec	Over 100	5	5.4%
	50 to 75	1	1.1%
	25 to 50	24	26.1%
	5 to 25	61	66.3%
	5 or Newer	1	1.1%
Overall		92	100.0%
Excluded		0	
Total		92	

**Ratio Statistics for CURRTOT / TASP**

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	1.038	1.074	.092	14.5%
50 to 75	1.000	1.000	.000	.
25 to 50	.996	1.259	.131	24.4%
5 to 25	1.000	1.194	.117	19.0%
5 or Newer	.763	1.000	.000	.
Overall	1.000	1.202	.120	20.0%

## Improved Area

### Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	3	3.3%
	500 to 1,000 sf	23	25.0%
	1,000 to 1,500 sf	24	26.1%
	1,500 to 2,000 sf	10	10.9%
	2,000 to 3,000 sf	6	6.5%
	3,000 sf or Higher	26	28.3%
Overall		92	100.0%
Excluded		0	
Total		92	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.874	1.078	.154	31.4%
500 to 1,000 sf	.988	1.032	.111	21.4%
1,000 to 1,500 sf	1.000	1.013	.059	9.4%
1,500 to 2,000 sf	1.000	1.040	.091	18.8%
2,000 to 3,000 sf	1.022	1.194	.123	22.2%
3,000 sf or Higher	1.000	1.211	.187	26.9%
Overall	1.000	1.202	.120	20.0%

## Improvement Quality

### Case Processing Summary

		Count	Percent
QUALITY	B	2	2.2%
	C	17	18.5%
	D	72	78.3%
	E	1	1.1%
Overall		92	100.0%
Excluded		0	
Total		92	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
B	1.012	1.002	.003	0.5%
C	.978	1.356	.146	23.0%
D	1.000	1.145	.115	19.6%
E	1.200	1.000	.000	.
Overall	1.000	1.202	.120	20.0%

## Improvement Condition

### Case Processing Summary

		Count	Percent
CONDITION	C	1	1.1%
	D	90	97.8%
	E	1	1.1%
Overall		92	100.0%
Excluded		0	
Total		92	

### Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
C	.998	1.000	.000	.
D	1.000	1.205	.122	20.3%
E	1.038	1.000	.000	.
Overall	1.000	1.202	.120	20.0%

## Vacant Land Median Ratio Stratification

### Sale Price

#### Case Processing Summary

		Count	Percent
SPRec	LT \$25K	4	1.1%
	\$25K to \$50K	5	1.3%
	\$50K to \$100K	31	8.3%
	\$100K to \$150K	77	20.7%
	\$150K to \$200K	64	17.2%
	\$200K to \$300K	88	23.7%
	\$300K to \$500K	58	15.6%
	\$500K to \$750K	21	5.6%
	\$750K to \$1,000K	14	3.8%
	Over \$1,000K	10	2.7%
Overall		372	100.0%
Excluded		0	
Total		372	

#### Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT \$25K	1.000	.990	.035	6.4%
\$25K to \$50K	1.000	1.001	.031	4.9%
\$50K to \$100K	1.091	1.007	.212	32.2%
\$100K to \$150K	1.000	.997	.179	30.0%
\$150K to \$200K	.992	1.004	.212	32.4%
\$200K to \$300K	1.000	1.005	.167	23.8%
\$300K to \$500K	.945	1.001	.175	31.5%
\$500K to \$750K	1.000	.997	.171	26.6%
\$750K to \$1,000K	1.142	.999	.244	32.7%
Over \$1,000K	.865	1.030	.106	13.4%
Overall	1.000	1.042	.186	29.3%

**Subclass**

**Case Processing Summary**

		Count	Percent
ABSTRLND	100	88	23.7%
	190	3	0.8%
	200	5	1.3%
	401	16	4.3%
	491	7	1.9%
	511	3	0.8%
	521	5	1.3%
	531	1	0.3%
	700	1	0.3%
	1112	161	43.3%
	1115	2	0.5%
	1135	45	12.1%
	1170	1	0.3%
	2112	1	0.3%
	2115	33	8.9%
Overall		372	100.0%
Excluded		0	
Total		372	

### Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100	1.000	1.038	.079	13.3%
190	.937	1.001	.072	11.5%
200	1.000	1.010	.108	18.3%
401	.982	1.086	.134	21.9%
491	.995	1.036	.040	7.4%
511	1.000	1.003	.324	68.8%
521	1.000	1.003	.049	7.0%
531	.236	1.000	.000	.
700	1.001	1.000	.000	.
1112	1.138	1.079	.239	31.5%
1115	1.305	1.103	.269	38.1%
1135	.913	1.037	.128	15.4%
1170	1.000	1.000	.000	.
2112	1.174	1.000	.000	.
2115	.981	1.029	.108	14.7%
Overall	1.000	1.042	.186	29.3%