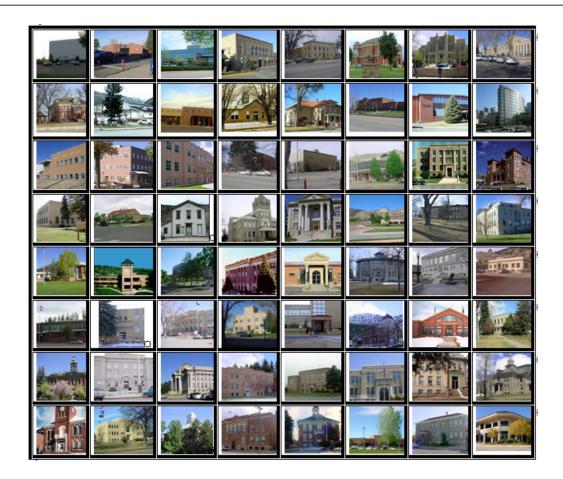


# 2014 EAGLE COUNTY PROPERTY ASSESSMENT STUDY







September 15, 2014

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

## RE: Final Report for the 2014 Colorado Property Assessment Study

Dear Mr. Mauer:

Wildrose Appraisal Inc.-Audit Division is pleased to submit the Final Reports for the 2014 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. Hullon

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 2014 and is pleased to report its findings for Eagle County in the following report.



# REGIONAL/HISTORICAL SKETCH OF EAGLE COUNTY

# **Regional Information**

Eagle 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**

Eagle County has a population of approximately 52,197 people with 30.92 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 25.3 percent change from the 2000 Census.

Eagle County was created by the Colorado legislature on February 11, 1883, from portions of Summit County. It was named after the Eagle River, which runs through the county. The county seat was originally set in Red Cliff, Colorado, but was moved to the town of Eagle in 1921. The Vail and Beaver Creek ski areas are located in Eagle County.

Much of the county is taken up by White River National Forest, and much of the rest is managed by the Bureau of Land Management. Interstate 70 crosses the county from east to west. The Eagle River rises in the southeastern part of the county. It receives Gore Creek at Dowds Junction, and joins the Colorado River in the west. Fryingpan River and the Roaring Fork River intersect the southwest corner of the county.

The town of Vail was established in 1966 at the base of Vail Ski Resort, which opened in December 1962. The town is famous for having the second largest single ski mountain in North America and other winter sports in addition to being a year round destination for outdoor activities.

The ski area was founded by Pete Seibert and the local rancher Earl Eaton in 1962, between the town of Eagle and Vail Pass. The pass was named after Charles Vail, the highway engineer that routed U.S. Highway 6 through the valley in 1940. Seibert, a New England native, served in the U.S. Army's 10th Mountain Division during World War II, which trained at Camp Hale, just southeast of Vail. He was seriously wounded in Italy and was told he should become a professional skier when he recovered. He was recognized as the best skier in the world for a short time. (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 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 Eagle County are:

	Eagle County Ratio Grid							
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis			
Commercial/Industrial	106	0.997	1.031	9.4	Compliant			
Condominium	763	0.999	1.005	5.9	Compliant			
Single Family	1,200	1.000	1.012	7.8	Compliant			
Vacant Land	179	0.999	1.095	16.9	Compliant			

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

Eagle 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 2014 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	Compliant
Single Family	Compliant
Vacant Land	Compliant

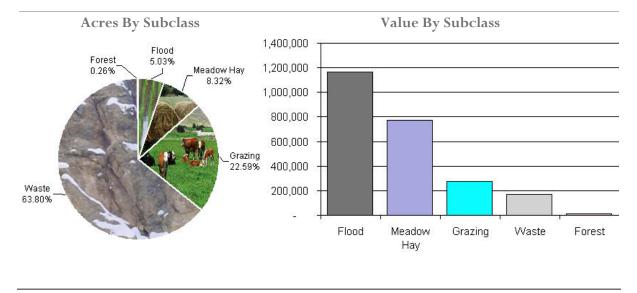
# Conclusions

# Recommendations

After applying the above described methodologies, it is concluded that Eagle 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. 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:



	Eagle County Agricultural Land Ratio Grid							
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Fotal Value	WRA Total Value	Ratio		
4117	Flood	7,699	152.00	1,168,121	1,182,366	0.99		
4137	Meadow Hay	12,734	61.00	773,367	773,367	1.00		
4147	Grazing	34,589	8.00	273,178	273,178	1.00		
4177	Forest	399	31.00	12,309	12,309	1.00		
4167	Waste	97,673	2.00	170,496	170,496	1.00		
Total/Avg		153,094	16.00	2,397,470	2,411,715	0.99		

#### Recommendations

None

# Agricultural Outbuildings

## Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.74 through 5.77 were being followed.

#### Conclusions

Eagle County has substantially complied with the procedures provided by the Division of Property Taxation for the valuation of agricultural outbuildings.

Recommendations

None

# Agricultural Land Under Improvements

# Methodology

Data was collected and reviewed to determine if the guidelines found in the Assessor's Reference Library (ARL) Volume 3, pages 5.19 and 5.20 were being followed.

#### Conclusions

Eagle 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 2014 for Eagle County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 38 sales listed as unqualified.

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

# Conclusions

Eagle 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

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



# VACANT LAND

#### **Subdivision Discounting**

Subdivisions were reviewed in 2014 in Eagle 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

Eagle 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.

Eagle 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

Eagle 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

Eagle 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.

Eagle 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
- 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
- Building Permit Records
- TD1000's
- Commercial Vacancy Field Work
- Business Activity Lists
- Property Management Contacts/Letters

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.

Eagle County submitted their personal property written audit plan and was current for the 2014 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
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts Best Information Available
- Accounts protested with substantial disagreement

# Conclusions

Eagle 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



# 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



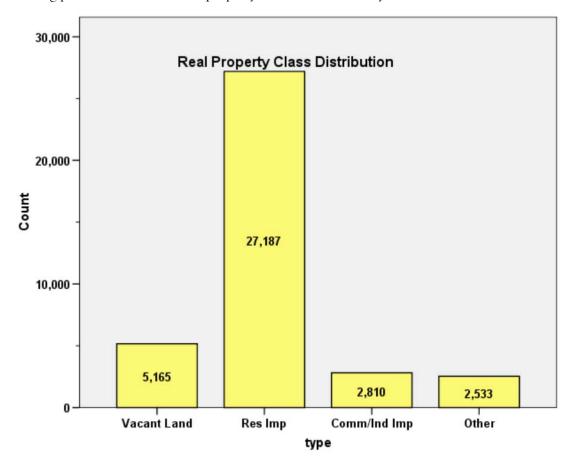
# **A P P E N D I C E S**



#### STATISTICAL COMPLIANCE REPORT FOR EAGLE COUNTY 2014

### I. OVERVIEW

Eagle County is a mountain resort county located in western Colorado. The county has a total of 37,695 real property parcels, according to data submitted by the county assessor's office in 2014. 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 400) accounted for 58.5% of all vacant land parcels.

For residential improved properties, single family properties accounted for 54.5% of all residential properties. Residential condominiums accounted for 44.0% of all residential improved properties. Based on the large number of residential condominiums in this county, they will be analyzed separately from single family residences in the residential ratio analysis section.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 7.5% of all such properties in this county.



## **II. DATA FILES**

The following sales analyses were based on the requirements of the 2014 Colorado Property Assessment Study. The data included all 5 property record files as specified by the Auditor.

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

There were 1,963 qualified residential sales in Eagle County for the 24 month period prior to June 30, 2014. The sales ratio analysis results were as follows:

#### Residential Non-Condo = 1,200

	·
Median	1.000
Price Related Differential	1.012
Coefficient of Dispersion	.078

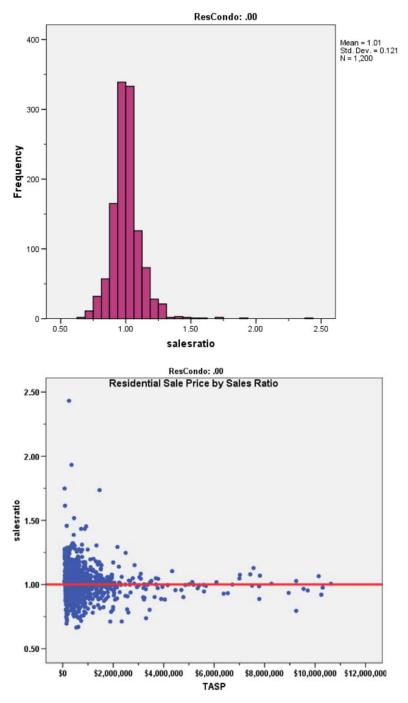
#### **Residential Condo = 763**

Median	0.999
Price Related Differential	1.005
Coefficient of Dispersion	.059

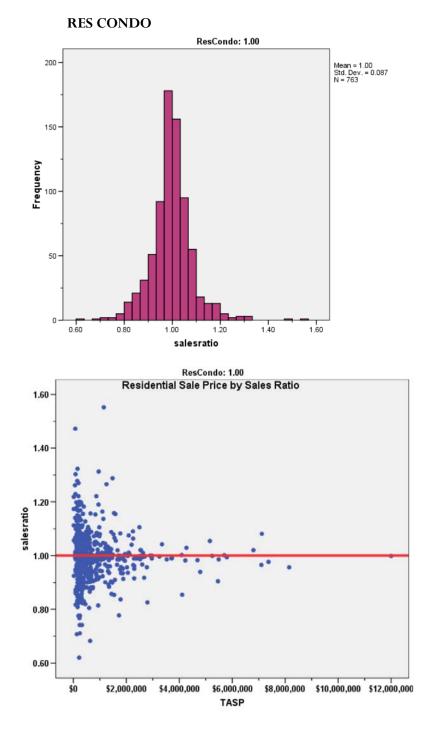
The above ratio statistics were in compliance with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall residential sales. The following graphs describe further the sales ratio distribution for these properties:



#### **RES NON-CONDO**







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:

	Coefficients <sup>a</sup>									
ResCondo	Model		Unstandardized Coefficients		Standardized Coefficients					
			В	Std. Error	Beta	t	Sig.			
.00	1	(Constant)	1.006	.006		170.843	.000			
		SalePeriod	5.787E-5	.000	.003	.118	.906			
1.00	1	(Constant)	.986	.006		171.912	.000			
		SalePeriod	.001	.000	.092	2.545	.011			

a. Dependent Variable: salesratio

The residential non- condominium analysis indicated no significant market trending across the 24month period used by the assessor. For the residential condominium market trend analysis, while there was a marginal trend statistically, the magnitude of the trend (at approximately 0.1% per month) was not significant.

## 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 2014 between each group stratified by residential non-condominiums and condominiums, as follows:

Residential Type	Group	Ν	Median	Mean
Residential Non-Condo	Unsold	14,013	\$236	\$333
	Sold	1,200	\$214	\$310
Residential Condo	Unsold	11,151	\$340	\$509
	Sold	756	\$316	\$442

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

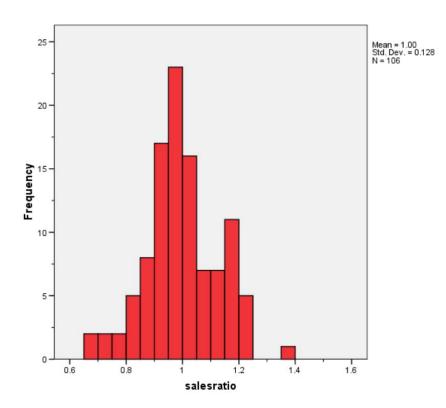


# IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

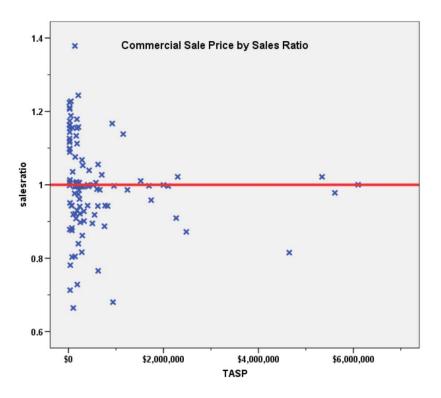
There were 106 qualified commercial and industrial sales in Eagle County for the 24 month period prior to June 30, 2014. The sales ratio analysis results were as follows:

Median	0.997
Price Related Differential	1.031
Coefficient of Dispersion	.094

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







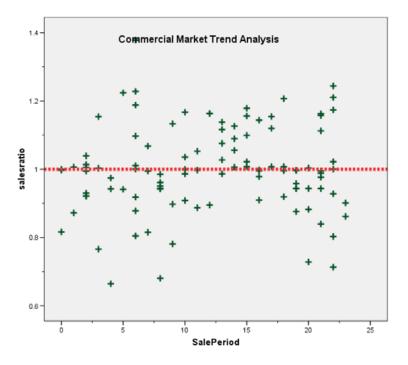
# **Commercial Market Trend Analysis**

The 106 commercial/industrial sales were next analyzed by subclass for any residual market trending, examining the sale ratios across the 24-month sale period with the following results:

Model		Unstandardized Coefficients		Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
1	(Constant)	.981	.025		38.789	.000
	SalePeriod	.001	.002	.079	.809	.421

a. Dependent Variable: salesratio





The market trend results indicated no significant 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:

Subclass	Group	No.	Median	Mean
Total	Unsold	2,637	\$157	\$224
	Sold	92	\$144	\$339

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

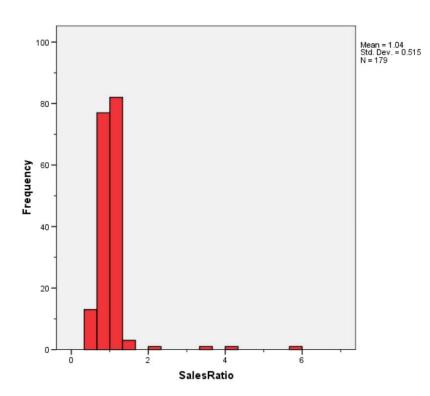


### **V. VACANT LAND SALE RESULTS**

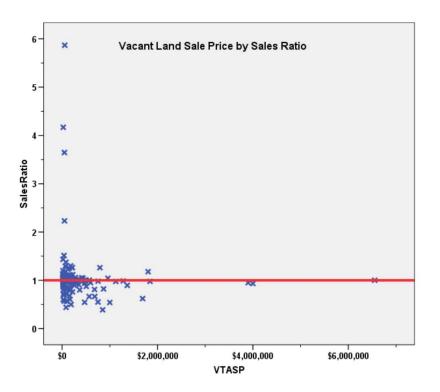
There were 179 qualified vacant land sales in Eagle County for the 24 month period prior to June 30, 2014. The sales ratio analysis results were as follows:

Median	0.999
Price Related Differential	1.095
Coefficient of Dispersion	.169

The above tables indicate that the Eagle 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

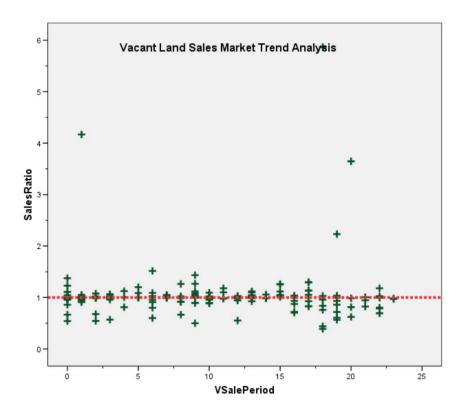
The assessor did not apply any market trend adjustments to the vacant land dataset. The 179 vacant land sales were analyzed, examining the sale ratios across the 24-month sale period with the following results:

**Coefficients**<sup>a</sup>

Γ	Model	Unstandardize	d Coefficients	Standardized Coefficients		
		В	Std. Error	Beta	t	Sig.
Γ	1 (Constant)	1.012	.069		14.755	.000
	VSalePeriod	.002	.006	.032	.420	.675

a. Dependent Variable: SalesRatio





The market trend results indicated no statistically significant trend. We concluded that the assessor has adequately considered market tending in Eagle County's vacant land valuation for 2014.

## Sold/Unsold Analysis

We compared the median change in actual value between 2012 and 2014 for vacant land properties to determine if sold and unsold properties were valued consistently, as follows:

Group	Ν	Median	Mean
Unsold	3,747	0.81	0.76
Sold	169	0.73	0.75

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; based on the parameters developed for the 2014 audit. Eagle County was exempt from this analysis.

### **VI. CONCLUSIONS**

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



#### STATISTICAL ABSTRACT

#### **Residential**

#### Ratio Statistics for CURRTOT / TASP

ResCo	ondo		95% Confiden Me			95% Confidence Interval for 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
	.00	1.007	1.000	1.013	1.000	.999	1.002	95.4%	.995	.986	1.004	1.012	.078	12.0%
1	1.00	.999	.992	1.005	.999	.996	1.000	95.7%	.994	.987	1.001	1.005	.059	8.7%

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.

#### 0 = Residential Non-Condominiums, 1 = Residential Condominiums

#### **Commercial/Industrial**

#### Ratio Statistics for CURRTOT / TASP

	95% Confiden Me			95% Confidence Interval for Median			95% Confiden Weighte	ce Interval for d Mean			Coefficient of Variation	
Mean	Lower Bound	Upper Bound	Median	Lower Bound	Upper Bound	Actual Coverage	Weighted Mean	Lower Bound	Upper Bound	Price Related Differential	Coefficient of Dispersion	Mean Centered
.999	.975	1.024	.997	.985	1.006	95.9%	.969	.938	1.000	1.031	.094	12.8%

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.

#### Vacant Land

#### Ratio Statistics for CURRLND / VTASP

	95% Confider Me	ice Interval for an		95% Confidence Interval for 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
1.036	.960	1.112	.999	.989	1.004	96.4%	.946	.902	.991	1.095	.169	49.7%

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.



# **Residential Median Ratio Stratification**

# Sale Price

#### **Case Processing Summary**

		Count	Percent
SPRec	LT \$25K	5	.3%
	\$50K to \$100K	46	2.3%
	\$100K to \$150K	117	6.0%
	\$150K to \$200K	182	9.3%
	\$200K to \$300K	380	19.4%
	\$300K to \$500K	453	23.1%
	\$500K to \$750K	257	13.1%
	\$750K to \$1,000K	146	7.4%
	Over \$1,000K	377	19.2%
Overall		1963	100.0%
Excluded	I	0	
Total		1963	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.113	1.010	.074	10.4%
\$50K to \$100K	1.069	1.002	.125	17.6%
\$100K to \$150K	1.004	1.001	.075	10.2%
\$150K to \$200K	1.001	.999	.070	10.4%
\$200K to \$300K	1.000	1.000	.064	11.3%
\$300K to \$500K	.998	1.000	.070	10.5%
\$500K to \$750K	.997	1.001	.075	10.5%
\$750K to \$1,000K	.999	1.000	.075	11.2%
Over \$1,000K	.997	1.006	.060	9.6%
Overall	1.000	1.009	.070	10.9%



Sub Class

# **Case Processing Summary**

		Count	Percent
ABSTRIMP	0	7	.4%
	1212	1189	60.6%
	1215	11	.6%
	1230	756	38.5%
Overall		1963	100.0%
Excluded		0	
Total		1963	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
0	1.057	1.086	.104	13.5%
1212	1.000	1.012	.077	12.1%
1215	1.027	1.018	.076	11.0%
1230	.999	1.004	.058	8.7%
Overall	1.000	1.009	.070	10.9%



Age

## **Case Processing Summary**

		Count	Percent
AgeRec	.00	7	.4%
	Over 100	5	.3%
	75 to 100	3	.2%
	50 to 75	15	.8%
	25 to 50	583	29.7%
	5 to 25	1290	65.7%
	5 or Newer	60	3.1%
Overall		1963	100.0%
Excluded		0	
Total		1963	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
.00	1.057	1.086	.104	13.5%
Over 100	1.037	1.030	.132	18.8%
75 to 100	.998	1.074	.044	8.2%
50 to 75	.996	1.050	.082	17.7%
25 to 50	.999	1.002	.065	10.2%
5 to 25	1.000	1.009	.070	10.2%
5 or Newer	.986	1.048	.102	23.7%
Overall	1.000	1.009	.070	10.9%



# Improved Area

# **Case Processing Summary**

		Count	Percent
ImpSFRec	.00	7	.4%
	LE 500 sf	19	1.0%
	500 to 1,000 sf	251	12.8%
	1,000 to 1,500 sf	499	25.4%
	1,500 to 2,000 sf	507	25.8%
	2,000 to 3,000 sf	439	22.4%
	3,000 sf or Higher	241	12.3%
Overall		1963	100.0%
Excluded		0	
Total		1963	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
.00	1.057	1.086	.104	13.5%
LE 500 sf	.999	1.001	.052	7.4%
500 to 1,000 sf	1.000	1.011	.071	10.8%
1,000 to 1,500 sf	.999	1.005	.062	9.1%
1,500 to 2,000 sf	.998	1.013	.071	11.6%
2,000 to 3,000 sf	1.000	1.012	.072	10.7%
3,000 sf or Higher	1.005	1.021	.080	13.2%
Overall	1.000	1.009	.070	10.9%



# **Commercial Median Ratio Stratification**

# Sale Price

#### Case Processing Summary

		Count	Percent
SPRec	LT \$25K	13	12.3%
	\$25K to \$50K	11	10.4%
	\$50K to \$100K	10	9.4%
	\$100K to \$150K	7	6.6%
	\$150K to \$200K	12	11.3%
	\$200K to \$300K	16	15.1%
	\$300K to \$500K	7	6.6%
	\$500K to \$750K	10	9.4%
	\$750K to \$1,000K	6	5.7%
	Over \$1,000K	14	13.2%
Overall		106	100.0%
Excluded	I	0	
Total		106	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.163	1.000	.061	9.5%
\$25K to \$50K	1.099	.995	.106	16.0%
\$50K to \$100K	.931	1.004	.094	14.1%
\$100K to \$150K	.995	1.001	.108	18.2%
\$150K to \$200K	1.005	1.001	.085	12.4%
\$200K to \$300K	.980	1.004	.083	11.4%
\$300K to \$500K	.995	.996	.038	5.5%
\$500K to \$750K	.987	.998	.058	9.0%
\$750K to \$1,000K	.943	.999	.106	16.8%
Over \$1,000K	.997	1.011	.048	7.9%
Overall	.997	1.031	.094	12.8%



# Sub Class

# Case Processing Summary

		Count	Percent
ABSTRIMP	0	14	13.2%
	1230	14	13.2%
	1738	1	.9%
	1879	1	.9%
	2212	2	1.9%
	2220	1	.9%
	2230	1	.9%
	2235	7	6.6%
	2245	65	61.3%
Overall		106	100.0%
Excluded		0	
Total		106	

Group					ficient of riation
	Median	Price Related Differential	Coefficient of Dispersion		edian ntered
0	.942	1.012	.093		14.8%
1230	.997	.998	.016		2.3%
1738	.928	1.000	.000	.%	
1879	.816	1.000	.000	.%	
2212	1.008	.998	.002		.3%
2220	1.000	1.000	.000	.%	
2230	1.039	1.000	.000	.%	
2235	.988	1.078	.100		12.9%
2245	1.003	1.083	.109		14.0%
Overall	.997	1.031	.094		12.8%



Age

# **Case Processing Summary**

		Count	Percent
AgeRec	.00	14	13.2%
	Over 100	1	.9%
	75 to 100	1	.9%
	50 to 75	1	.9%
	25 to 50	19	17.9%
	5 to 25	66	62.3%
	5 or Newer	4	3.8%
Overall		106	100.0%
Excluded		0	
Total		106	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
.00	.942	1.012	.093	14.8%
Over 100	1.000	1.000	.000	.%
75 to 100	1.006	1.000	.000	.%
50 to 75	1.056	1.000	.000	.%
25 to 50	.988	1.032	.063	10.7%
5 to 25	1.007	1.038	.104	13.3%
5 or Newer	.998	.995	.029	5.3%
Overall	.997	1.031	.094	12.8%



# Improved Area

# Case Processing Summary

		Count	Percent
ImpSFRec	.00	14	13.2%
	LE 500 sf	26	24.5%
	500 to 1,000 sf	18	17.0%
	1,000 to 1,500 sf	11	10.4%
	1,500 to 2,000 sf	15	14.2%
	2,000 to 3,000 sf	6	5.7%
	3,000 sf or Higher	16	15.1%
Overall		106	100.0%
Excluded		0	
Total		106	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
.00	.942	1.012	.093	14.8%
LE 500 sf	1.098	1.066	.095	12.9%
500 to 1,000 sf	.999	1.000	.073	10.6%
1,000 to 1,500 sf	.995	1.028	.084	12.0%
1,500 to 2,000 sf	.997	1.004	.069	10.5%
2,000 to 3,000 sf	.996	1.058	.106	18.9%
3,000 sf or Higher	1.000	1.018	.080	12.1%
Overall	.997	1.031	.094	12.8%



# Vacant Land Median Ratio Stratification

# Sale Price

# Case Processing Summary

		Count	Percent
SPRec	LT \$25K	31	17.3%
	\$25K to \$50K	28	15.6%
	\$50K to \$100K	29	16.2%
	\$100K to \$150K	19	10.6%
	\$150K to \$200K	16	8.9%
	\$200K to \$300K	21	11.7%
	\$300K to \$500K	13	7.3%
	\$500K to \$750K	6	3.4%
	\$750K to \$1,000K	7	3.9%
	Over \$1,000K	9	5.0%
Overall		179	100.0%
Excluded	I	0	
Total		179	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
LT \$25K	1.030	.997	.180	57.2%
\$25K to \$50K	.980	.958	.254	60.6%
\$50K to \$100K	1.000	1.053	.275	93.8%
\$100K to \$150K	1.009	.996	.048	8.4%
\$150K to \$200K	.993	.994	.146	21.8%
\$200K to \$300K	1.003	1.003	.063	10.8%
\$300K to \$500K	.994	1.000	.072	14.7%
\$500K to \$750K	.843	1.007	.136	17.0%
\$750K to \$1,000K	.823	1.007	.314	38.7%
Over \$1,000K	.978	.989	.085	15.2%
Overall	.999	1.095	.169	51.6%



# Sub Class

# **Case Processing Summary**

	Count	Percent
100	42	23.5%
200	2	1.1%
400	66	36.9%
530	2	1.1%
540	1	.6%
550	6	3.4%
1112	53	29.6%
1115	2	1.1%
1135	2	1.1%
2115	1	.6%
2130	2	1.1%
Overall	179	100.0%
Excluded	0	
Total	179	

Group				Coefficient of Variation
	Median	Price Related Differential	Coefficient of Dispersion	Median Centered
100	1.020	1.084	.117	23.5%
200	.969	1.033	.036	5.1%
400	1.000	1.025	.210	73.7%
530	1.047	1.033	.051	7.3%
540	.952	1.000	.000	.%
550	.991	1.082	.139	21.6%
1112	.994	1.047	.165	41.2%
1115	.796	1.156	.320	45.3%
1135	.984	1.000	.000	.0%
2115	.665	1.000	.000	.%
2130	.670	.788	.419	59.2%
Overall	.999	1.095	.169	51.6%