2014
ARCHULETA COUNTY PROPERTY ASSESSMENT STUDY

WILDROSE
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Audit Division

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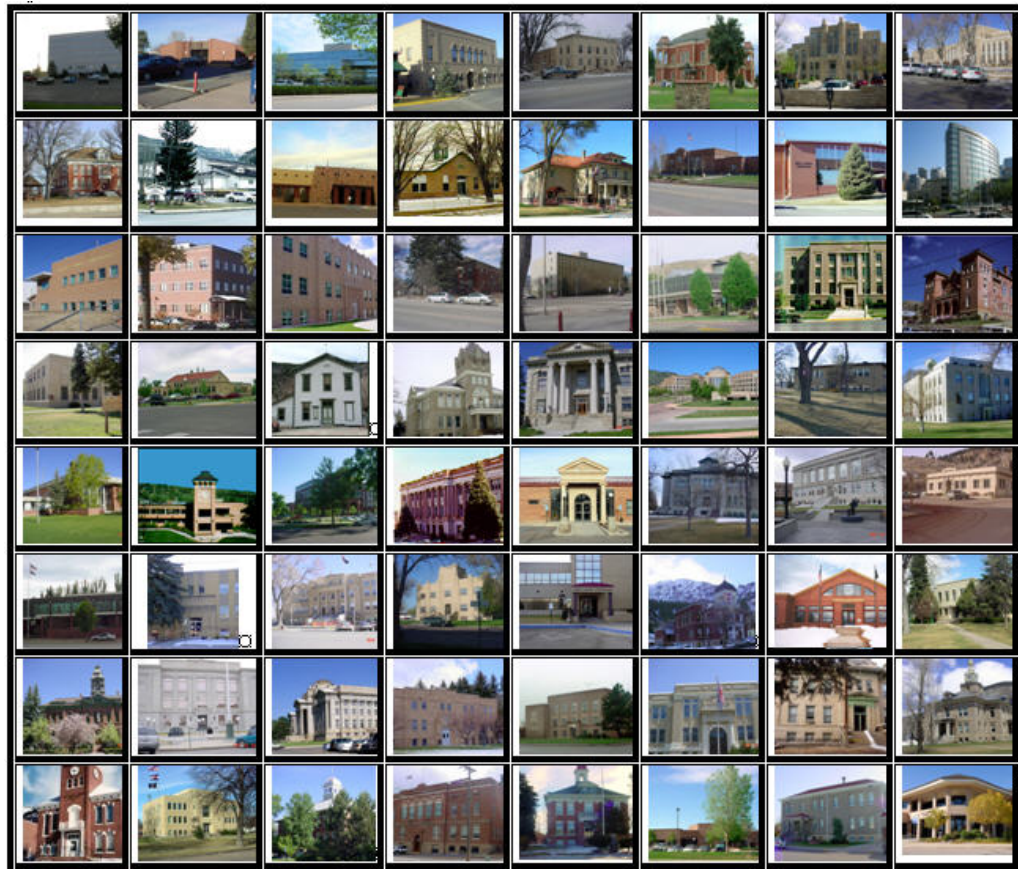
September 15, 2014

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. Fuller
Project Manager
Wildrose Appraisal Inc. — Audit Division

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INTRODUCTION

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

REGIONAL/HISTORICAL SKETCH OF ARCHULETA COUNTY

Regional Information

Archuleta 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

Archuleta County has a population of approximately 12,084 people with 8.95 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 22.09 percent change from the 2000 Census.

The portion of Colorado that is now Archuleta County was originally occupied by the Anasazi, then by the Ute, Navajo and Apache. This area was first claimed for Spain by the early Spanish explorers. After the Mexican revolution it was in the Territory of Northern Mexico. Upon conclusion of the war with Mexico in 1848, it became a possession of the United States and was part of the Utah Territory. While a part of the Utah Territory this area was included in Iron County and later a portion was part of Washington County. Congress recognized the Colorado Territory in 1861 and at that time it became part of Conejos County, Colorado. Archuleta County was formed April 14,1885. It was named in honor of State Senator Antonio D. Archuleta.

The Escalante Trail and later the Spanish Trail traversed this area and was a trade route between Santa Fe and California. The Spanish Trail was traveled by many now famous persons such as Pratt, Wolfskill and Carson.

Other than Native Americans, the earliest inhabitants of the area were miners, fur trappers and traders seeking their fortunes. The military made several expeditions into and through the area. One expedition was led by Lt. Col. E. H. Bergman to locate a suitable spot to construct Fort Plummer. Prior to the fort's construction, however, Col. William Henry Lewis, a graduate of the U.S. Military Academy at West Point and a distinguished veteran of the Civil War Battle of Glorieta Pass was killed in a battle on the Kansas frontier. The fort was subsequently named in his honor. Fort Lewis was established near the sacred Pagosa Hot Springs in 1878. Fort Lewis was moved to Hesperus Colorado in 1881 and on January 21, 1881 the military issued a general order to change the name of the temporary camp from Fort Lewis to Pagosa Springs. The Town of Pagosa Springs, the county seat and only municipality in the county, was incorporated on March 2, 1891.

(pagosamuseum.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 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 Archuleta County are:

Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Archuleta County Ratio Grid					
Commercial/Industrial	41	0.988	0.973	11.5	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	392	1.003	1.009	13.8	Compliant
Vacant Land	227	1.000	1.046	14.8	Compliant

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

Archuleta 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 non-parametric 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 multi-variate mass appraisal model that developed ratio statistics from the sold properties that were then applied to the unsold sample. This test compared the measures of central tendency and confidence intervals for the sold properties with the unsold property sample. If this comparison was also determined to be significantly different, then the conclusion was that the county had treated the unsold properties in a different manner than sold properties.

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

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

Conclusions

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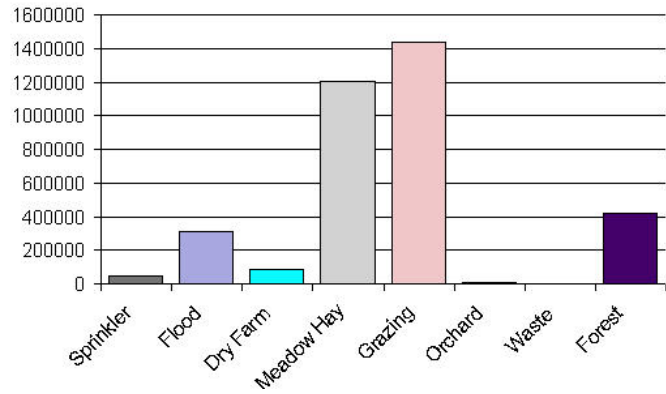
Recommendations

None

AGRICULTURAL LAND STUDY
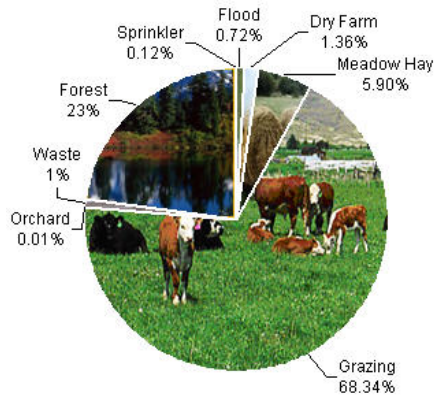
Acres By Subclass	Value By Subclass

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:

Archuleta County Agricultural Land Ratio Grid						
Abstract Code	Land Class	Number Of Acres	County Value Per Acre	County Assessed Total Value	WRA Total Value	Ratio
4107	Sprinkler	294	165.00	48,517	48,517	1.00
4117	Flood	1,713	156.00	312,893	308,593	1.01
4127	Dry Farm	3,229	26.00	83,454	83,598	1.00
4137	Meadow Hay	13,998	86.00	1,200,776	1,200,776	1.00
4147	Grazing	162,015	9.00	1,438,513	1,438,513	1.00
4157	Orchard	33	173.00	5,773	5,773	1.00
4177	Forest	53,771	8.00	418,238	418,238	1.00
4167	Waste	2,012	2.00	3,512	3,512	1.00
Total/Avg		237,065	15.00	3,463,158	3,459,002	1.00

Recommendations

None

Agricultural Outbuildings

Methodology

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

Conclusions

Archuleta 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

Archuleta 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 2014 for Archuleta County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 36 sales listed as unqualified.

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

Conclusions

Archuleta 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

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

Archuleta County has submitted a written narrative describing the economic areas that make up the county's market areas. Archuleta 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 Archuleta County has adequately identified homogeneous economic areas comprised of smaller neighborhoods. Each economic area defined is equally subject to a set of economic forces that impact the value of the properties within that geographic area and this has been adequately addressed. Each economic area defined adequately delineates an area that will give "similar values for similar properties in similar areas."

Recommendations

None

NATURAL RESOURCES

Earth and Stone Products

Methodology

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

Conclusions

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

Recommendations

None

Producing Oil and Gas

Methodology

Assessors Reference Library (ARL) Volume 3, Chapter 6: Valuation of Natural Resources

STATUTORY REFERENCES

Section § 39-1-103, C.R.S., specifies that producing oil or gas leaseholds and lands are valued according to article 7 of title 39, C.R.S.

Actual value determined – when.
(2) The valuation for assessment of leaseholds and lands producing oil or gas shall be determined as provided in article 7 of this title.
§ 39-1-103, C.R.S.
Article 7 covers the listing, valuation, and assessment of producing oil and gas leaseholds and lands.

Valuation:
Valuation for assessment.
(1) Except as provided in subsection (2) of this section, on the basis of the information contained in such statement, the assessor shall value such oil and gas leaseholds and lands for assessment, as real property, at an amount equal to eighty-seven and one-half percent of:
(a) The selling price of the oil or gas sold there from during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year;
(b) The selling price of oil or gas sold in the same field area for oil or gas transported from the premises which is not sold during the preceding calendar year, after excluding the selling price of all oil or gas delivered to the United States government or any agency thereof, the state of Colorado or any agency thereof, or any political subdivision of the state as royalty during the preceding calendar year.
§ 39-7-102, C.R.S.

Conclusions

The county applied approved appraisal procedures in the valuation of oil and gas.

Recommendations

None

VACANT LAND

Subdivision Discounting

Subdivisions were reviewed in 2014 in Archuleta 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

Archuleta 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.

Archuleta County has been reviewed for their procedures and adherence to guidelines when assessing and valuing agricultural and commercial possessory interest properties. The county has also been queried as to their confidence that the possessory interest properties have been discovered and placed on the tax rolls.

Conclusions

Archuleta 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

Archuleta 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.

Archuleta 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
- VRBO website

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.

Archuleta 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
- Accounts with greater than 10% change
- Incomplete or inconsistent declarations
- Businesses with no deletions or additions for 2 or more years

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

Conclusions

Archuleta 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*

STATISTICAL COMPLIANCE REPORT
FOR ARCHULETA COUNTY
2014

I. OVERVIEW

Archuleta County is located in southwestern Colorado. The county has a total of 17,177 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:
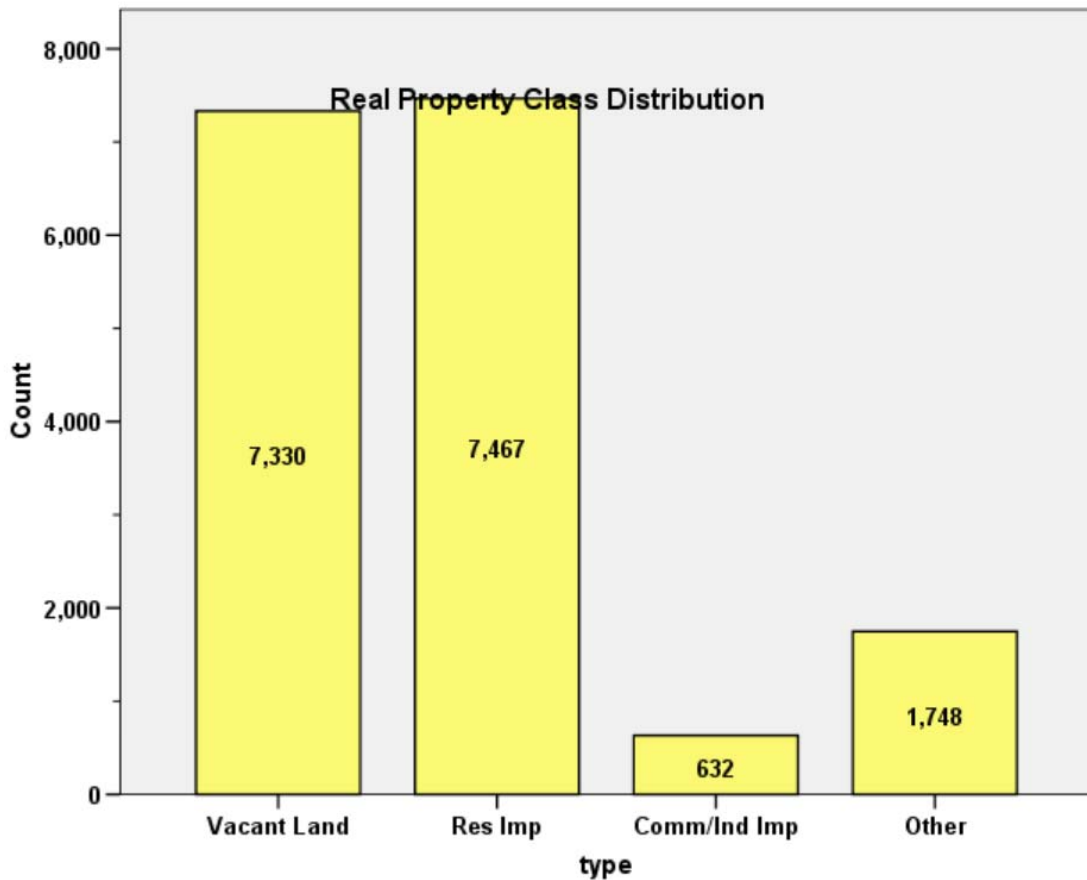
The vacant land class of properties was dominated by residential land. Residential lots (coded 100 and 1112) accounted for 84.9% of all vacant land parcels.

For residential improved properties, single family properties accounted for 82.0% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial sales accounted for 3.7% 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. Information was provided by the Archuleta Assessor's Office in May 2014. The data included all 5 property record files as specified by the Auditor.

III. RESIDENTIAL SALES RESULTS

There were 392 qualified residential sales. The sales ratio analysis results were as follows:

Median	**1.003**
Price Related Differential	**1.009**
Coefficient of Dispersion	**.138**

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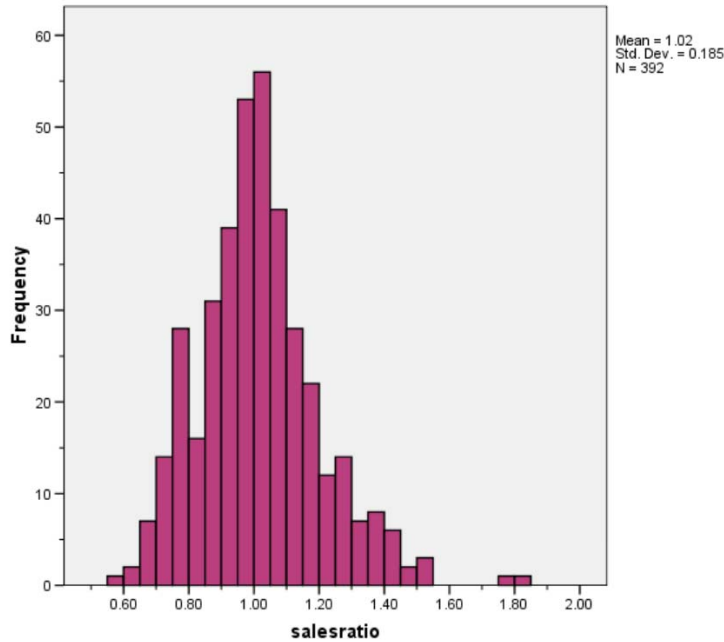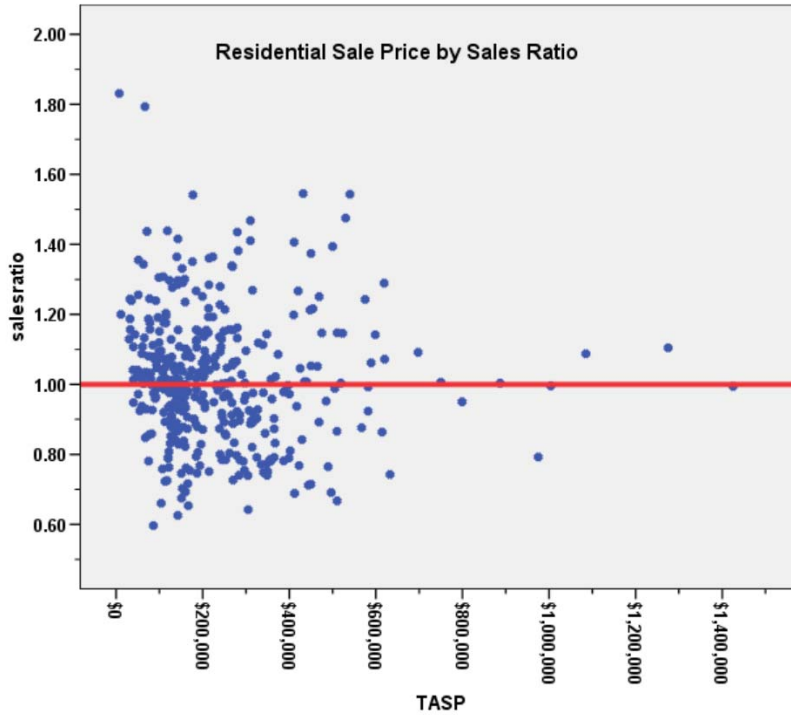
The above graphs indicate that the distribution of the sale ratios was within state mandated limits. No sales were trimmed.

Residential Market Trend Analysis

We next analyzed the residential dataset using the 24-month sale period for any residual market trending, with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.014	.018		56.008	.000
	SalePeriod	.000	.001	.004	.086	.931

a. Dependent Variable: salesratio
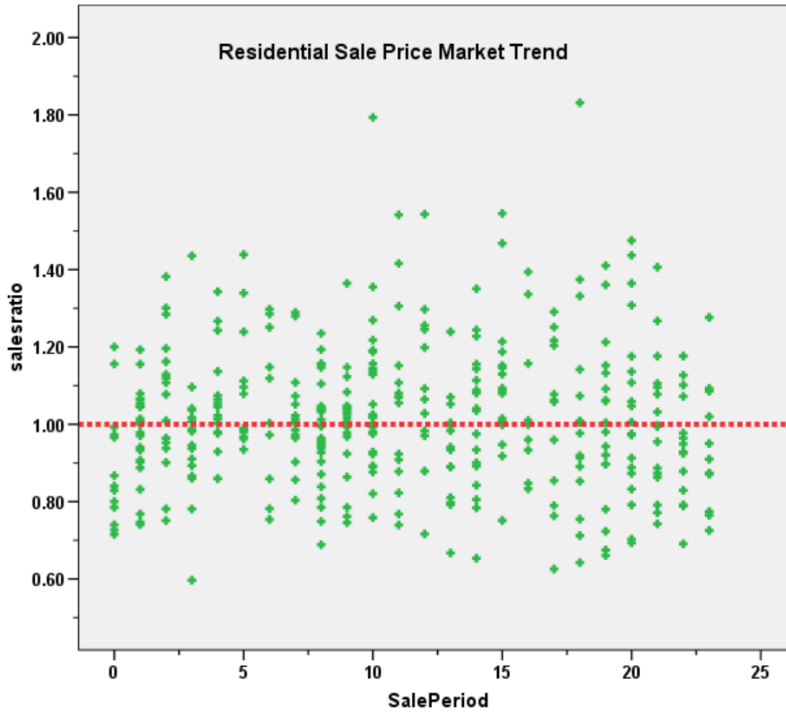
With no significant statistical trend evident in the sales ratio data, the above analysis indicated that the assessor has adequately addressed market trending in the valuation of residential properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median value per square feet between each group, as follows:

Group	No.	Median Val/SF	Mean Val/SF
Unsold	7,073	$136	$204
Sold	390	$119	$176

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

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 41 qualified commercial/industrial sales. The sales ratio analysis results were as follows:

Median	0.988
Price Related Differential	0.973
Coefficient of Dispersion	.115

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

Mean = 0.94
Std. Dev. = 0.157
N = 41

Commercial Sale Price by Sales Ratio
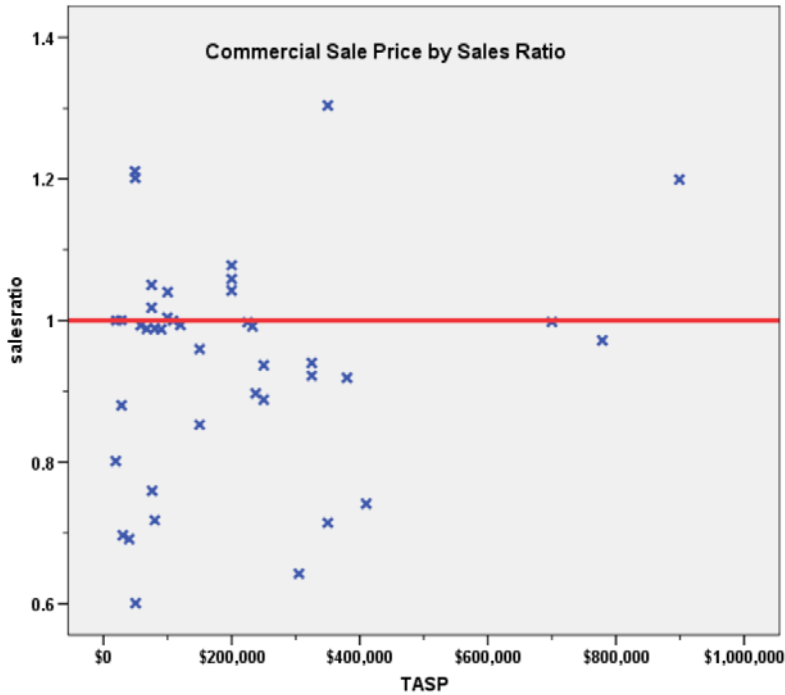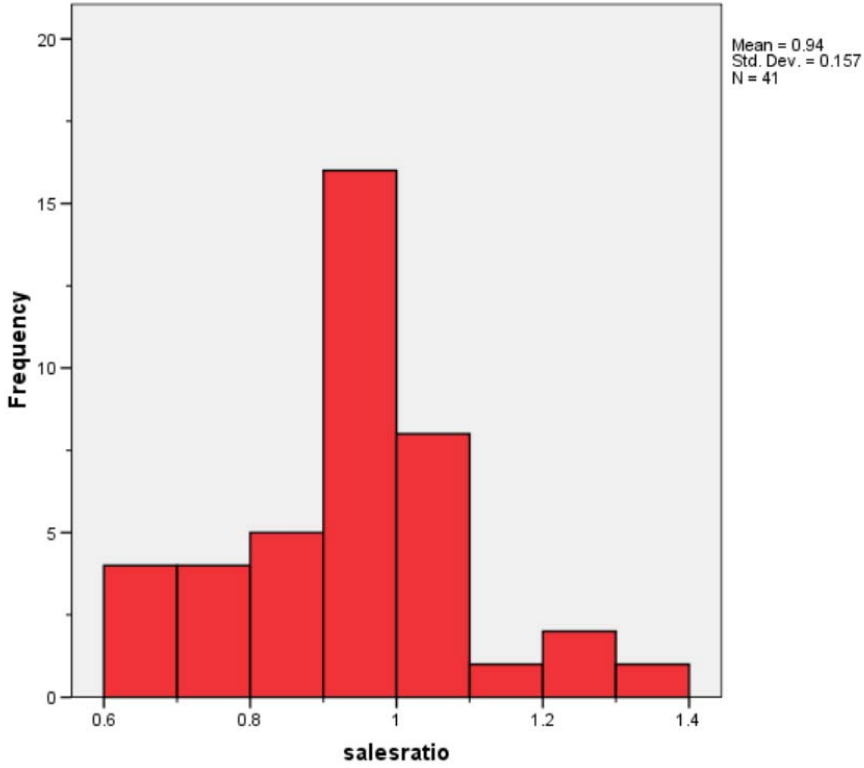
Commercial Market Trend Analysis

The 41 commercial/industrial sales were next analyzed by subclass for any residual market trending, examining the sale ratios across the 36-month sale period with the following results:
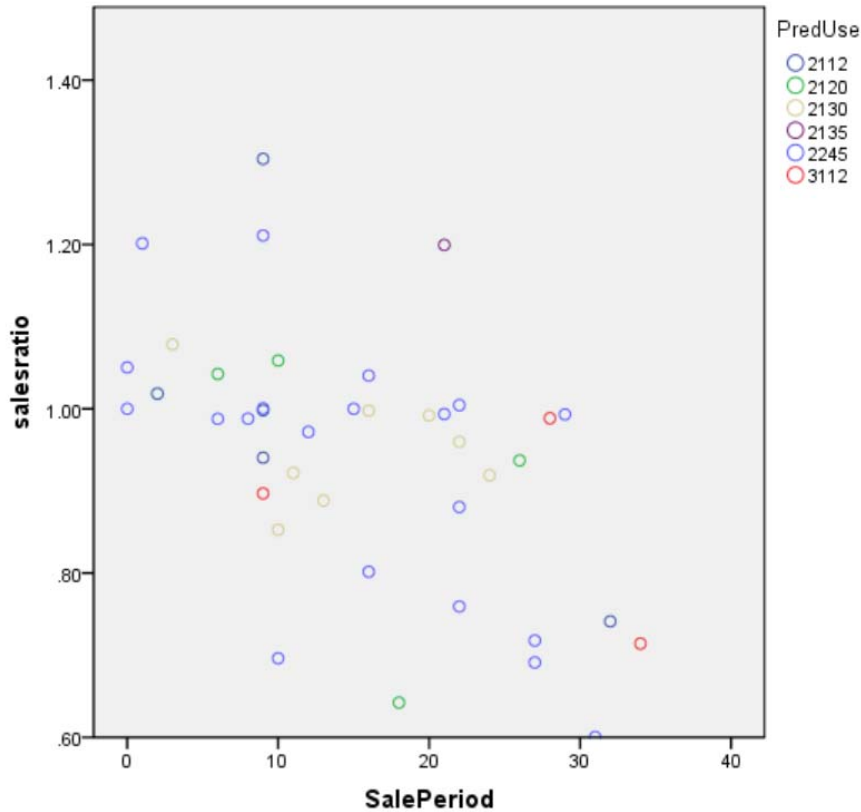
The market trend results indicated no significant residual sales ratio trend in the commercial/industrial data when stratified by subclass. We therefore concluded that the assessor adequately considered market trending in their valuation of commercial and industrial properties.

Sold/Unsold Analysis

We compared the median values per square feet between sold and unsold commercial properties to determine if the assessor was valuing each group consistently, as follows:

Group	N	Median Val/SF	Mean Val/SF
Unsold	588	$84	$124
Sold	41	$91	$102

Based on the above results, we concluded that the Archuleta County assessor was valuing commercial sold properties consistently above unsold commercial properties of the same subclass.

V. VACANT LAND SALE RESULTS

There were 247 qualified vacant land sales initially in our analysis. Due to high sales ratios, we trimmed 10 sales (4% of total) and 10 other sale properties that have since been deactivated. The remaining 227 sales were analyzed as follows:

Median	1.000
Price Related Differential	1.046
Coefficient of Dispersion	.148

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

Mean = 1.05
Std. Dev. = 0.231
N = 227

Vacant Land Sale Price by Sales Ratio
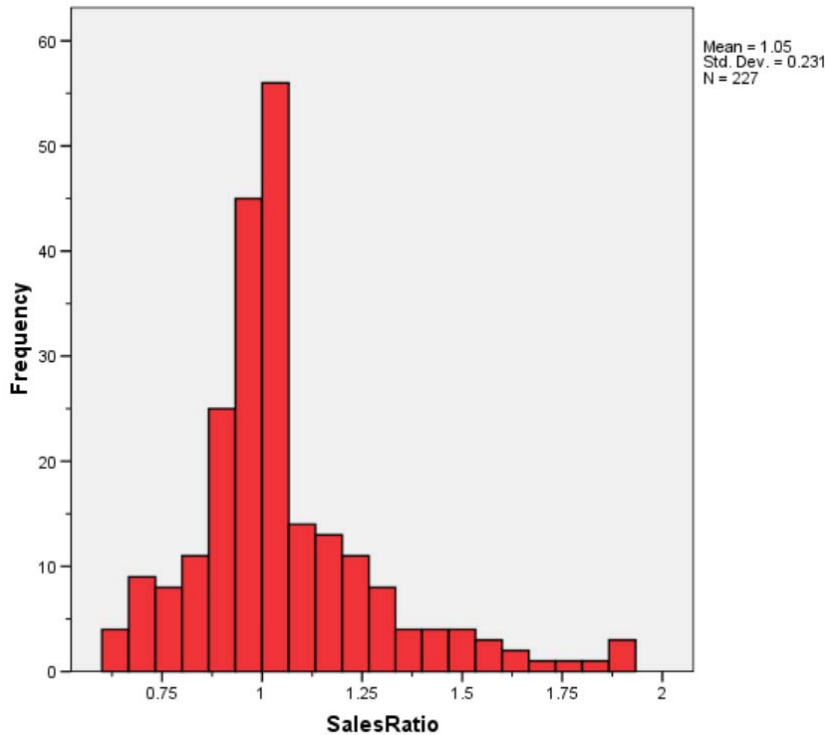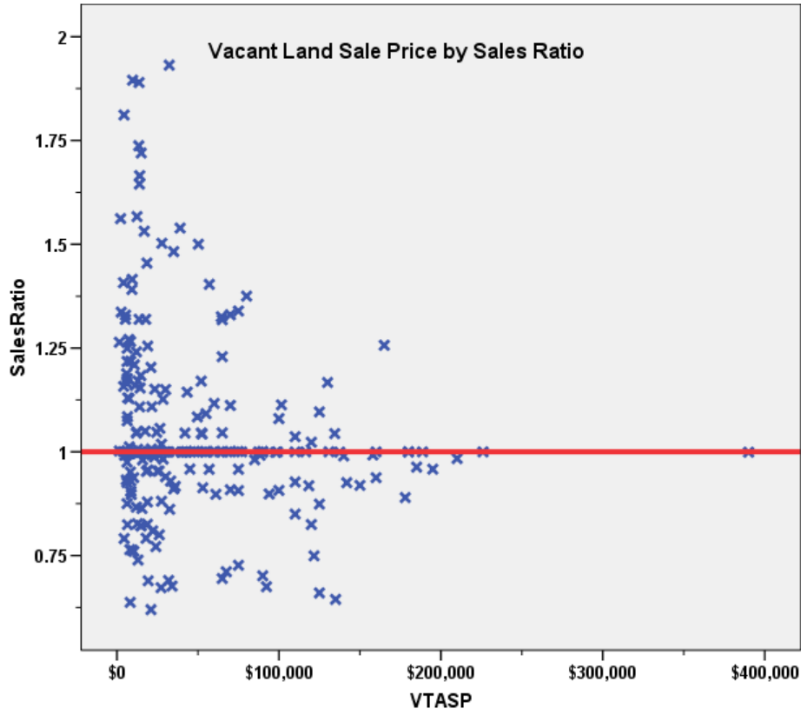
Vacant Land Market Trend Analysis

The 227 vacant land sales were analyzed for residual market trending, examining the sale ratios across the 24 month sale period with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.057	.028		37.118	.000
	VSalePeriod	-.001	.002	-.020	-.298	.766

a. Dependent Variable: SalesRatio
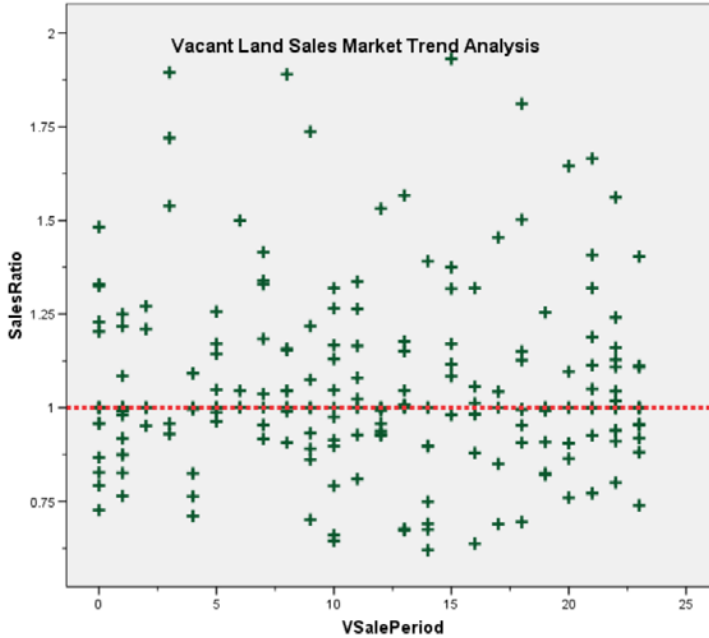
With no significant statistical trend evident in the sales ratio data, the above analysis indicated that the assessor has adequately addressed market trending in the valuation of vacant land properties.

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	N	Median	Mean
Unsold	6,883	0.85	1.08
Sold	227	0.86	0.98

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 median actual value for this group and compared it to the median actual value for residential single family improvements in Archuleta County in selected neighborhoods.

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

Descriptives

ABSTRIMP				Statistic	Std. Error
ImpValSF	**SFR**	Mean		$201.18	$7.427
		95% Confidence Interval for Mean	Lower Bound	$186.57	
			Upper Bound	$215.80	
		5% Trimmed Mean		$192.19	
		Median		$186.72	
		Variance		15663.692	
		Std. Deviation		$125.155	
		Minimum		$0	
		Maximum		$729	
		Range		$729	
		Interquartile Range		$156	
		Skewness		1.195	.145
		Kurtosis		2.214	.288
	Ag Res	Mean		$241.21	$19.332
		95% Confidence Interval for Mean	Lower Bound	$202.88	
			Upper Bound	$279.54	
		5% Trimmed Mean		$221.26	
		Median		$181.03	
		Variance		39615.034	
		Std. Deviation		$199.035	
		Minimum		$6	
		Maximum		$972	
		Range		$966	
		Interquartile Range		$198	
		Skewness		1.714	.235
		Kurtosis		3.178	.465

VI. CONCLUSIONS

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

STATISTICAL ABSTRACT

Residential

Ratio Statistics for CURRTOT / TASP

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
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
1.015	.997	1.033	1.003	.986	1.015	95.1%	1.006	.984	1.028	1.009	.138	18.2%

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

Commercial/Industrial

Ratio Statistics for CURRTOT / TASP

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
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
.943	.894	.993	.988	.919	1.000	97.2%	.969	.896	1.043	.973	.115	16.6%

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

Vacant Land

Ratio Statistics for CURRLND / VTASP

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
	Lower Bound	Upper Bound		Lower Bound	Upper Bound	Actual Coverage		Lower Bound	Upper Bound			Mean Centered
1.050	1.020	1.080	1.000	1.000	1.000	95.4%	1.003	.978	1.029	1.046	.148	22.0%

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

Residential Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	2	.5%
	$25K to $50K	12	3.1%
	$50K to $100K	49	12.5%
	$100K to $150K	86	21.9%
	$150K to $200K	61	15.6%
	$200K to $300K	87	22.2%
	$300K to $500K	68	17.3%
	$500K to $750K	20	5.1%
	$750K to $1,000K	3	.8%
	Over $1,000K	4	1.0%
Overall		392	100.0%
Excluded		0	
Total		392	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.516	1.045	.208	29.5%
$25K to $50K	1.119	1.008	.069	8.5%
$50K to $100K	1.048	1.003	.121	17.8%
$100K to $150K	.994	.999	.113	15.8%
$150K to $200K	.977	.998	.149	19.1%
$200K to $300K	1.010	1.004	.126	16.0%
$300K to $500K	.927	.994	.176	23.2%
$500K to $750K	1.034	1.001	.159	21.3%
$750K to $1,000K	.950	1.006	.074	12.4%
Over $1,000K	1.042	1.000	.048	5.7%
Overall	1.003	1.009	.138	18.5%

Sub Class

Case Processing Summary

		Count	Percent
ABSTRIMP	0	2	.5%
	1212	341	87.0%
	1215	3	.8%
	1220	1	.3%
	1230	45	11.5%
Overall		392	100.0%
Excluded		0	
Total		392	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	1.516	1.045	.208	29.5%
1212	1.003	1.008	.141	18.6%
1215	.983	1.014	.036	6.8%
1220	1.017	1.000	.000	.%
1230	.988	1.018	.110	14.4%
Overall	1.003	1.009	.138	18.5%

Age

Case Processing Summary

		Count	Percent
AgeRec	.00	2	.5%
	75 to 100	1	.3%
	50 to 75	3	.8%
	25 to 50	108	27.6%
	5 to 25	273	69.6%
	5 or Newer	5	1.3%
Overall		392	100.0%
Excluded		0	
Total		392	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	1.516	1.045	.208	29.5%
75 to 100	.626	1.000	.000	.%
50 to 75	.964	1.032	.110	18.9%
25 to 50	1.006	1.008	.112	14.9%
5 to 25	1.001	1.012	.145	19.2%
5 or Newer	1.088	.933	.086	17.1%
Overall	1.003	1.009	.138	18.5%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	.00	2	.5%
	LE 500 sf	28	7.1%
	500 to 1,000 sf	83	21.2%
	1,000 to 1,500 sf	102	26.0%
	1,500 to 2,000 sf	89	22.7%
	2,000 to 3,000 sf	64	16.3%
	3,000 sf or Higher	24	6.1%
Overall		392	100.0%
Excluded		0	
Total		392	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
.00	1.516	1.045	.208	29.5%
LE 500 sf	.990	1.016	.170	20.6%
500 to 1,000 sf	1.003	1.036	.119	15.5%
1,000 to 1,500 sf	1.006	1.004	.129	18.2%
1,500 to 2,000 sf	.986	1.008	.132	17.2%
2,000 to 3,000 sf	.998	1.013	.158	20.6%
3,000 sf or Higher	1.080	1.010	.127	17.4%
Overall	1.003	1.009	.138	18.5%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	2	10	2.6%
	3	329	84.4%
	4	6	1.5%
	5	6	1.5%
	6	4	1.0%
	7	21	5.4%
	8	5	1.3%
	9	1	.3%
	10	1	.3%
	11	3	.8%
	12	4	1.0%
Overall		390	100.0%
Excluded		2	
Total		392	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	1.084	1.076	.178	27.0%
3	.996	1.007	.134	17.7%
4	1.071	1.005	.104	17.7%
5	1.053	.986	.081	13.4%
6	1.139	1.025	.082	14.1%
7	1.004	1.019	.140	18.9%
8	1.012	.955	.065	9.3%
9	1.239	1.000	.000	.%
10	.703	1.000	.000	.%
11	.927	1.073	.177	33.0%
12	.944	1.024	.114	13.7%
Overall	1.003	1.007	.136	18.0%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	2	14	3.8%
	3	350	95.4%
	4	3	.8%
Overall		367	100.0%
Excluded		25	
Total		392	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	1.023	.953	.161	23.2%
3	1.003	1.010	.136	18.0%
4	1.088	.968	.102	16.3%
Overall	1.004	1.008	.137	18.2%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	2	4.9%
	$25K to $50K	7	17.1%
	$50K to $100K	10	24.4%
	$100K to $150K	4	9.8%
	$150K to $200K	3	7.3%
	$200K to $300K	5	12.2%
	$300K to $500K	7	17.1%
	$500K to $750K	1	2.4%
	$750K to $1,000K	2	4.9%
Overall		41	100.0%
Excluded		0	
Total		41	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation — Median Centered
LT $25K	.901	.997	.110	15.6%
$25K to $50K	.880	.985	.231	28.4%
$50K to $100K	.991	.998	.067	12.4%
$100K to $150K	.977	1.007	.046	7.6%
$150K to $200K	1.059	1.000	.011	1.7%
$200K to $300K	.937	1.001	.044	5.5%
$300K to $500K	.919	1.000	.166	24.3%
$500K to $750K	.998	1.000	.000	.%
$750K to $1,000K	1.086	.993	.105	14.8%
Overall	.988	.973	.115	16.5%

Sub Class

Case Processing Summary

		Count	Percent
ABSTRIMP	1212	1	2.4%
	2212	5	12.2%
	2215	1	2.4%
	2220	3	7.3%
	2230	7	17.1%
	2234	1	2.4%
	2245	20	48.8%
	3212	3	7.3%
Overall		41	100.0%
Excluded		0	
Total		41	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212	.642	1.000	.000	.%
2212	.998	1.011	.128	20.2%
2215	1.078	1.000	.000	.%
2220	1.042	1.006	.039	7.2%
2230	.922	1.000	.045	5.9%
2234	1.199	1.000	.000	.%
2245	.991	.972	.121	18.0%
3212	.897	1.067	.102	16.1%
Overall	.988	.973	.115	16.5%

Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	5	12.2%
	75 to 100	1	2.4%
	50 to 75	2	4.9%
	25 to 50	10	24.4%
	5 to 25	23	56.1%
Overall		41	100.0%
Excluded		0	
Total		41	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	.853	.993	.086	12.1%
75 to 100	.937	1.000	.000	.%
50 to 75	.979	1.026	.040	5.6%
25 to 50	.993	1.002	.030	5.0%
5 to 25	.988	.954	.148	20.0%
Overall	.988	.973	.115	16.5%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	2	4.9%
	500 to 1,000 sf	16	39.0%
	1,000 to 1,500 sf	8	19.5%
	1,500 to 2,000 sf	1	2.4%
	2,000 to 3,000 sf	6	14.6%
	3,000 sf or Higher	8	19.5%
Overall		41	100.0%
Excluded		0	
Total		41	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.749	1.016	.070	9.9%
500 to 1,000 sf	.988	.998	.123	18.3%
1,000 to 1,500 sf	.980	1.053	.075	10.8%
1,500 to 2,000 sf	.994	1.000	.000	.%
2,000 to 3,000 sf	.958	1.028	.105	16.1%
3,000 sf or Higher	.985	.983	.131	18.6%
Overall	.988	.973	.115	16.5%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	2	1	2.4%
	3	37	90.2%
	4	3	7.3%
Overall		41	100.0%
Excluded		0	
Total		41	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	.998	1.000	.000	.%
3	.988	.965	.119	16.9%
4	.972	.994	.088	16.9%
Overall	.988	.973	.115	16.5%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	2	3	10.7%
	3	15	53.6%
	4	5	17.9%
	7	3	10.7%
	8	2	7.1%
Overall		28	100.0%
Excluded		13	
Total		41	

Ratio Statistics for CURRTOT / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
2	.960	.958	.144	25.9%
3	.998	.950	.128	19.2%
4	.919	.983	.069	10.8%
7	.988	.998	.003	.7%
8	.990	.999	.002	.2%
Overall	.988	.974	.105	16.2%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	109	48.0%
	$25K to $50K	35	15.4%
	$50K to $100K	49	21.6%
	$100K to $150K	21	9.3%
	$150K to $200K	10	4.4%
	$200K to $300K	2	.9%
	$300K to $500K	1	.4%
Overall		227	100.0%
Excluded		0	
Total		227	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.000	1.018	.185	27.7%
$25K to $50K	1.000	.997	.140	25.0%
$50K to $100K	1.000	1.010	.116	18.4%
$100K to $150K	.990	1.002	.105	14.8%
$150K to $200K	.996	1.002	.052	9.8%
$200K to $300K	.992	1.000	.008	1.2%
$300K to $500K	.999	1.000	.000	.%
Overall	1.000	1.046	.148	23.6%

Sub Class

Case Processing Summary

		Count	Percent
abstrlnd	100	159	70.0%
	200	9	4.0%
	520	3	1.3%
	530	1	.4%
	540	2	.9%
	550	2	.9%
	1112	50	22.0%
	1135	1	.4%
Overall		227	100.0%
Excluded		0	
Total		227	

Ratio Statistics for CURRLND / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
100	1.000	1.041	.155	24.3%
200	.954	1.016	.104	16.8%
520	1.000	1.016	.031	6.6%
530	1.229	1.000	.000	.%
540	.990	.994	.009	1.3%
550	1.010	1.008	.026	3.7%
1112	1.000	1.037	.143	24.0%
1135	.739	1.000	.000	.%
Overall	1.000	1.046	.148	23.6%