2013
PUEBLO COUNTY
PROPERTY ASSESSMENT
STUDY

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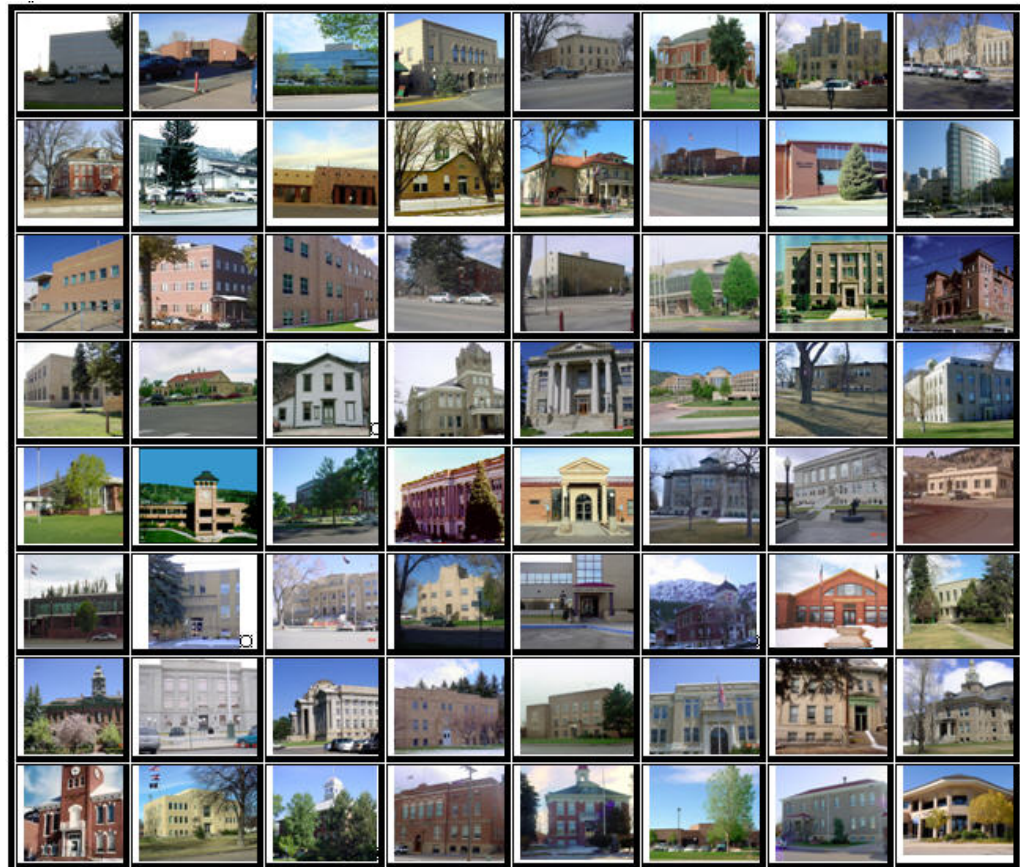
WILDROSE
APPRAISAL, INCORPORATED
Audit Division

September 15, 2013

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

RE: Final Report for the 2013 Colorado Property Assessment Study

Dear Mr. Mauer:

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

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

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

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

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

Harry J. Fuller

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 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 2013 and is pleased to report its findings for Pueblo County in the following report.

REGIONAL/HISTORICAL SKETCH OF PUEBLO COUNTY

Regional Information

Pueblo County is located in the Front Range region of Colorado. The Colorado Front Range is a colloquial geographic term for the populated areas of the State that are just east of the foothills of the Front Range. It includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Pueblo, and Weld counties.

Historical Information

Pueblo County has a population of approximately 159,063 people with 66.58 people per square mile, according to the U.S. Census Bureau's 2010 census data. This represents a 12.43 percent change from the 2000 Census.

Pueblo County, one of the seventeen original territorial counties, was established in 1861 with an area of 2,405 square miles. The county was named for its county seat, Pueblo, Spanish for 'town' or 'village.' Originally called Independence, it had been a settlement for many years, occupied at times by Spaniards, trappers, Indian traders, and Mexicans.

Pueblo is a Home Rule Municipality and is the county seat and the most populous city of Pueblo County. It is situated at the confluence of the Arkansas River and Fountain Creek. The area is considered to be semi-arid with approximately 14 inches of precipitation annually; however with its location in the "banana belt," Pueblo tends to get less snow than the other major cities in Colorado. Pueblo is one of the largest steel-producing cities in the United States. Because of this, Pueblo is referred to as the "Steel City." Many consider Pueblo to be the economic hub of south eastern Colorado. Due to this some people call Pueblo "Colorado's second city" even though Pueblo is the state's ninth most populous city. It is now home to a number of electronics and aviation companies. The Historic Arkansas River Project (HARP) is a beautiful river walk that graces the historic Union Avenue district. It shows the history of the Pueblo Flood.

Pueblo is also the home to Colorado's largest single event, the Colorado State Fair and the largest parade, the state fair parade. Pueblo also hosts an annual Chili Festival and the Wild West Fest.

(www.Wikipedia.org, William Bright, Colorado Place Names, 3rd Edition, Johnson Books, 2004, p. 143)

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 Pueblo County are:

Pueblo County Ratio Grid					
Property Class	Number of Qualified Sales	Unweighted Median Ratio	Price Related Differential	Coefficient of Dispersion	Time Trend Analysis
Commercial/Industrial	57	0.960	1.014	20.6	Compliant
Condominium	N/A	N/A	N/A	N/A	N/A
Single Family	1,853	1.020	1.019	11.5	Compliant
Vacant Land	139	1.000	1.150	18.5	Compliant

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1	.986	1.020	.159
10	1.009	1.009	.079
11	1.041	1.009	.088
12	1.026	1.018	.150
13	1.002	1.016	.104
2	1.020	1.019	.115
3	1.030	1.025	.130
4	1.007	1.018	.124
5	1.006	1.026	.132
6	1.030	1.013	.088
7	1.027	1.011	.102
8	1.021	1.027	.115
9	1.007	1.021	.116
Overall	1.020	1.019	.115

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

Pueblo County was tested for the equal treatment of sold and unsold properties to ensure that "sales chasing" has not occurred. The auditors employed a multi-step process to determine if sold and unsold properties were valued in a consistent manner.

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

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

was at least 1% of the total population of unsold properties and excluded any sale properties. The unsold sample was filtered based on the attributes of the sold dataset to closely correlate both groups. The ratio analysis was then performed on the unsold properties and stratified. The median and mean ratio distribution was then compared between the sold and unsold group. A 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 Pueblo County is reasonably treating its sold and unsold properties in the same manner.

Recommendations

None

AGRICULTURAL LAND STUDY

Acres By Subclass	Value By Subclass
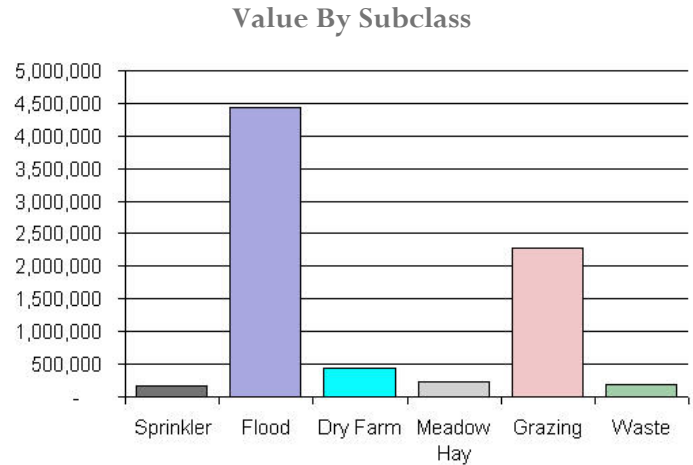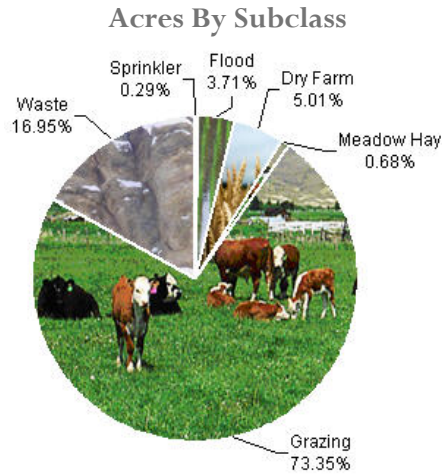
Agricultural Land

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. 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:

			Pueblo 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	1,889	83.00	157,602	164,922	0.96
4117	Flood	24,460	182.00	4,443,908	4,532,019	0.98
4127	Dry Farm	33,024	13.00	437,693	440,115	0.99
4137	Meadow Hay	4,507	51.00	231,696	231,696	1.00
4147	Grazing	483,025	5.00	2,278,097	2,278,097	1.00
4167	Waste	111,630	2.00	194,859	194,859	1.00
Total/Avg		658,535	12.00	7,743,855	7,841,707	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

Pueblo 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.

Pueblo County utilized the following discovery method(s):

- Questionnaires

Conclusions

Pueblo 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

S A L E S V E R I F I C A T I O N

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 2013 for Pueblo County. This study was conducted by checking selected sales from the master sales list for the current valuation period. Specifically WRA selected 439 sales listed as unqualified.

All but three of the sales selected in the sample gave reasons that were clear and supportable. Three sales had no justification for disqualification.

For residential, commercial, and vacant land sales with considerations over $500, the contractor has examined and reported the ratio of qualified sales to total sales by class and performed the following analyses of unqualified sales:

> The contractor has examined the manner in which sales have been classified as qualified or unqualified, including a listing of each step in the sales verification process, any adjustment procedures, and the county official responsible for making the final decision on qualification.

> When less than 50 percent of sales are qualified in any of the three property classes (residential, commercial, and vacant land), the contractor analyzed the reasons for disqualifying sales in any subclass that constitutes at least 20 percent of the class, either by number

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

If 50 percent or more of the sales are qualified, the contractor has reviewed a statistically significant sample of unqualified sales, excluding sales that were disqualified for obvious reasons.

The following subclasses were analyzed for Pueblo County:

- 0100 Residential Lots
- 0200 Commercial Lots
- 2112 Merchandising
- 2130 Special Purpose

Conclusions

Pueblo County appears to be doing a good job of verifying their sales. There are no recommendations.

Recommendations

None

ECONOMIC AREA REVIEW AND EVALUATION

Methodology

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

VACANT LAND

Subdivision Discounting

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

Conclusions

Pueblo 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.

Pueblo 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

Pueblo 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

Pueblo 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.

Pueblo 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
- Local Telephone Directories, Newspapers or Other Local Publications
- Personal Observation, Physical Canvassing or Word of Mouth

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.

Pueblo County submitted their personal property written audit plan and was current for the 2013 valuation period. The number and listing of businesses audited was also submitted and was in conformance with the written audit plan. The following audit triggers were used by the county to select accounts to be audited:

- Accounts with obvious discrepancies
- New businesses filing for the first time
- Incomplete or inconsistent declarations
- Accounts with omitted property
- Same business type or use
- Businesses with no deletions or additions for 2 or more years
- Non-filing Accounts - Best Information Available
- Accounts close to the $7,000 actual value exemption status

- Accounts protested with substantial disagreement

Pueblo County's median ratio is 1.00. This is in compliance with the State Board of Equalization (SBOE) compliance requirements which range from .90 to 1.10 with no COD requirements.

Conclusions

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

Recommendations

None

WILDROSE AUDITOR STAFF

Harry J. Fuller, *Audit Project Manager*

Suzanne Howard, *Audit Administrative Manager*

Steve Kane, *Audit Statistician*

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

J. Andrew Rodriguez, *Field Analyst*

APPENDICES

STATISTICAL COMPLIANCE REPORT
FOR PUEBLO COUNTY
2013

I. OVERVIEW

Pueblo County is located along the southern portion of Colorado's Front Range urban corridor. The county had a total of 98,261 real property parcels, according to data submitted by the county assessor's office in 2013. The following provides a breakdown of property classes for this county:
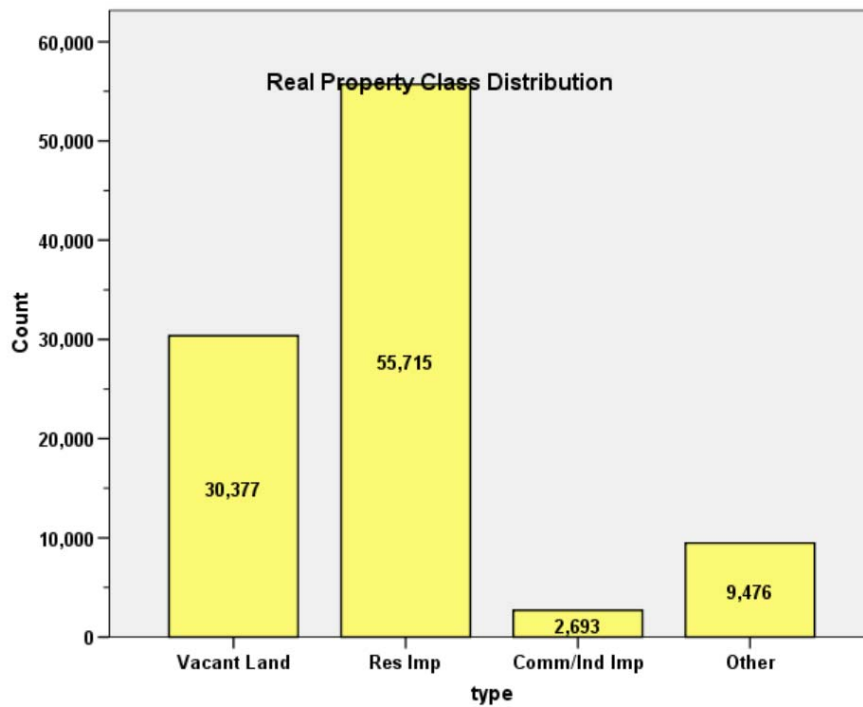
The vacant land class of properties was dominated by residential land. Residential lots (coded 100) accounted for 84.3% of all vacant land parcels.

For residential improved properties, single family properties accounted for 93.7% of all residential properties.

Commercial and industrial properties represented a much smaller proportion of property classes in comparison. Commercial/industrial properties accounted for 2.7% of all such properties in this county.

II. DATA FILES

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

III. RESIDENTIAL SALES RESULTS

There were 1,853 qualified residential sales for the 18 month period prior to June 30, 2013. The sales ratio analysis was analyzed as follows:

Case Processing Summary

		Count	Percent
econarea	1	53	2.9%
	10	80	4.3%
	11	39	2.1%
	12	53	2.9%
	13	127	6.9%
	2	156	8.4%
	3	192	10.4%
	4	53	2.9%
	5	188	10.1%
	6	149	8.0%
	7	174	9.4%
	8	413	22.3%
	9	176	9.5%
Overall		1853	100.0%
Excluded		0	
Total		1853	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion
1	.986	1.020	.159
10	1.009	1.009	.079
11	1.041	1.009	.088
12	1.026	1.018	.150
13	1.002	1.016	.104
2	1.020	1.019	.115
3	1.030	1.025	.130
4	1.007	1.018	.124
5	1.006	1.026	.132
6	1.030	1.013	.088
7	1.027	1.011	.102
8	1.021	1.027	.115
9	1.007	1.021	.116
Overall	1.020	1.019	.115

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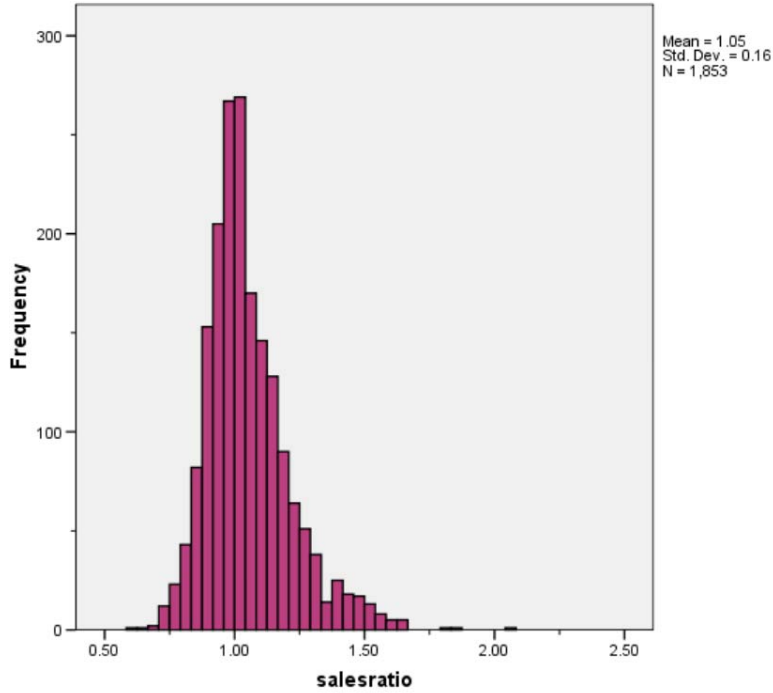
The above graphs indicate that the distribution of the sale ratios was within state mandated limits.

Residential Market Trend Analysis

We next analyzed the residential dataset for any residual market trending using the 18-month sale period and broken down by economic area, as follows:

Coefficients[a]

econarea	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
1	1	(Constant)	1.072	.053		20.101	.000
		SalePeriod	-.005	.006	-.129	-.929	.357
10	1	(Constant)	1.030	.026		39.082	.000
		SalePeriod	.001	.003	.027	.235	.815
11	1	(Constant)	1.031	.043		23.896	.000
		SalePeriod	.007	.005	.236	1.479	.148
12	1	(Constant)	1.129	.047		23.920	.000
		SalePeriod	-.007	.005	-.202	-1.475	.146
13	1	(Constant)	1.007	.025		40.231	.000
		SalePeriod	.003	.003	.108	1.213	.228
2	1	(Constant)	1.061	.025		42.429	.000
		SalePeriod	2.052E-5	.003	.001	.007	.994
3	1	(Constant)	1.080	.026		40.839	.000
		SalePeriod	-.002	.003	-.051	-.706	.481
4	1	(Constant)	1.080	.039		27.844	.000
		SalePeriod	-.006	.004	-.204	-1.486	.143
5	1	(Constant)	1.036	.024		43.534	.000
		SalePeriod	-.001	.002	-.029	-.399	.691
6	1	(Constant)	1.033	.020		52.757	.000
		SalePeriod	.002	.002	.076	.925	.357
7	1	(Constant)	1.063	.021		51.238	.000
		SalePeriod	-.001	.002	-.022	-.295	.769
8	1	(Constant)	1.047	.015		71.733	.000
		SalePeriod	.002	.002	.050	1.010	.313
9	1	(Constant)	1.060	.022		47.483	.000
		SalePeriod	-.002	.003	-.068	-.900	.369

a. Dependent Variable: salesratio

There was no significant residual market trending present in the sale ratio data for any of the economic areas; while two economic areas had a marginal statistically significant residual trend, the magnitude of

both trends was not significant. We therefore concluded that the assessor has adequately addressed market trending in the valuation of residential properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold residential properties, we compared the median actual value per square foot for 2013 between each group. The data was analyzed broken down by economic area, as follows:

Econarea	Group	N	Median	Mean
1	Unsold	4470	$48.81	$51.80
	Sold	53	$50.00	$54.37
2	Unsold	3838	$91.54	$96.34
	Sold	156	$98.12	$101.75
3	Unsold	4838	$80.68	$84.49
	Sold	192	$90.17	$93.55
4	Unsold	3353	$51.33	$53.53
	Sold	53	$60.16	$61.87
5	Unsold	5532	$70.28	$73.24
	Sold	188	$74.49	$78.71
6	Unsold	3989	$104.81	$101.75
	Sold	149	$109.18	$107.97
7	Unsold	5212	$101.81	$101.55
	Sold	174	$106.57	$107.10
8	Unsold	7649	$106.03	$103.13
	Sold	413	$111.54	$108.05
9	Unsold	7647	$93.15	$94.25
	Sold	176	$101.70	$102.39
10	Unsold	991	$100.05	$102.30
	Sold	80	$100.54	$100.29
11	Unsold	1026	$53.43	$60.45
	Sold	39	$85.34	$78.58
12	Unsold	2316	$47.48	$51.55
	Sold	53	$57.87	$59.32
13	Unsold	1891	$103.73	$103.53
	Sold	127	$105.22	$104.31
Total	Unsold	53244	$84.74	$85.16
	Sold	1853	$98.26	$96.94

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

IV. COMMERCIAL/INDUSTRIAL SALE RESULTS

There were 57 qualified commercial/industrial sales for the 18 month period prior to June 30, 2013. The sales ratio analysis was analyzed as follows:

Median	0.960
Price Related Differential	1.014
Coefficient of Dispersion	.206

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

Commercial Sale Price by Sales Ratio
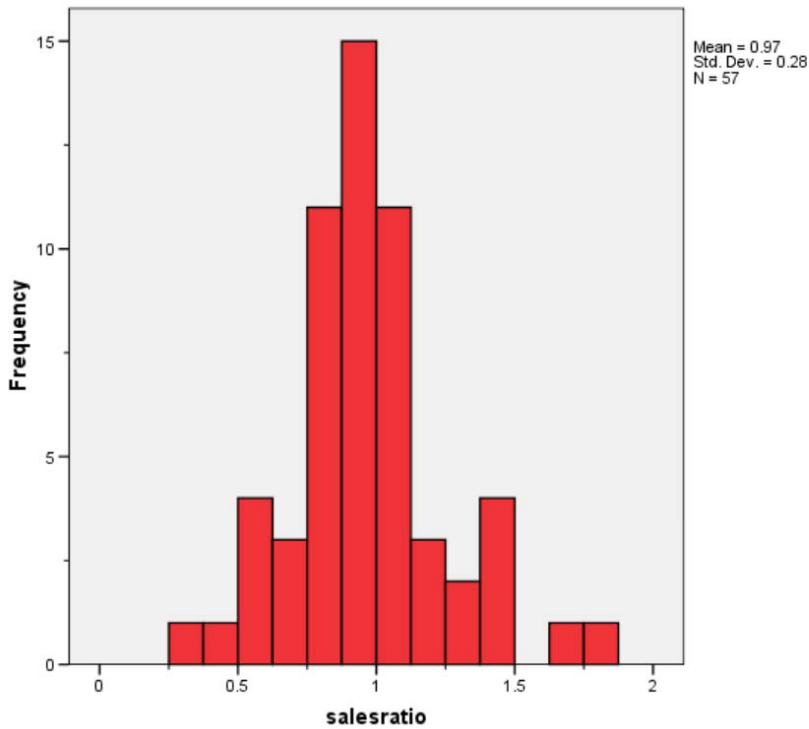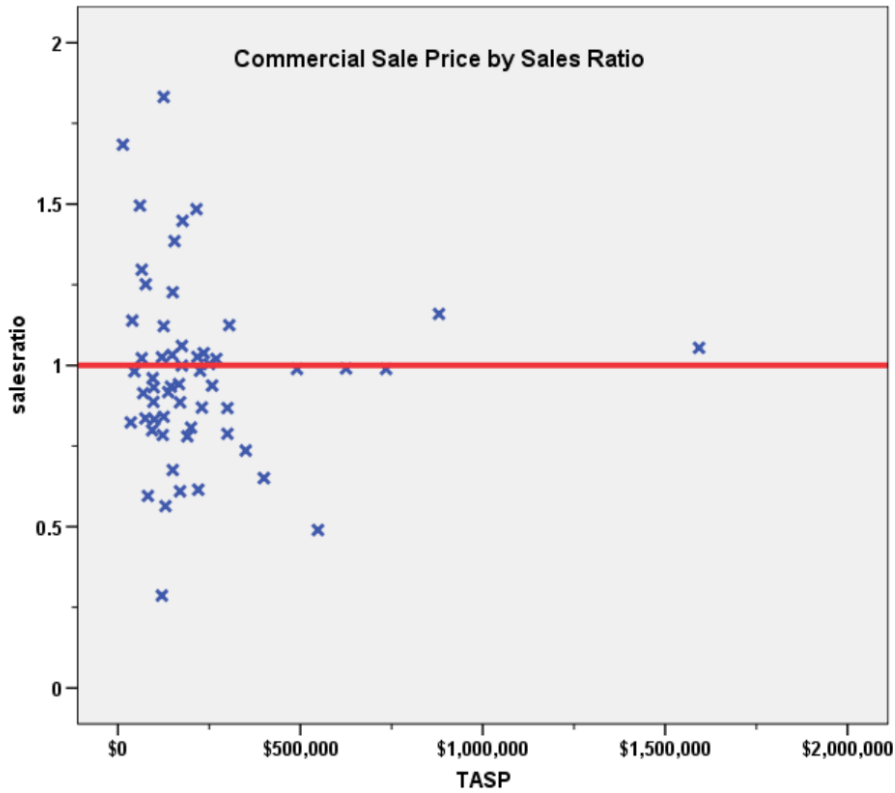
Commercial/Industrial Market Trend Analysis

The 57 commercial/industrial sales were analyzed, 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)	.963	.067		14.290	.000
	SalePeriod	.001	.005	.022	.164	.870

a. Dependent Variable: salesratio

Commercial Market Trend Analysis
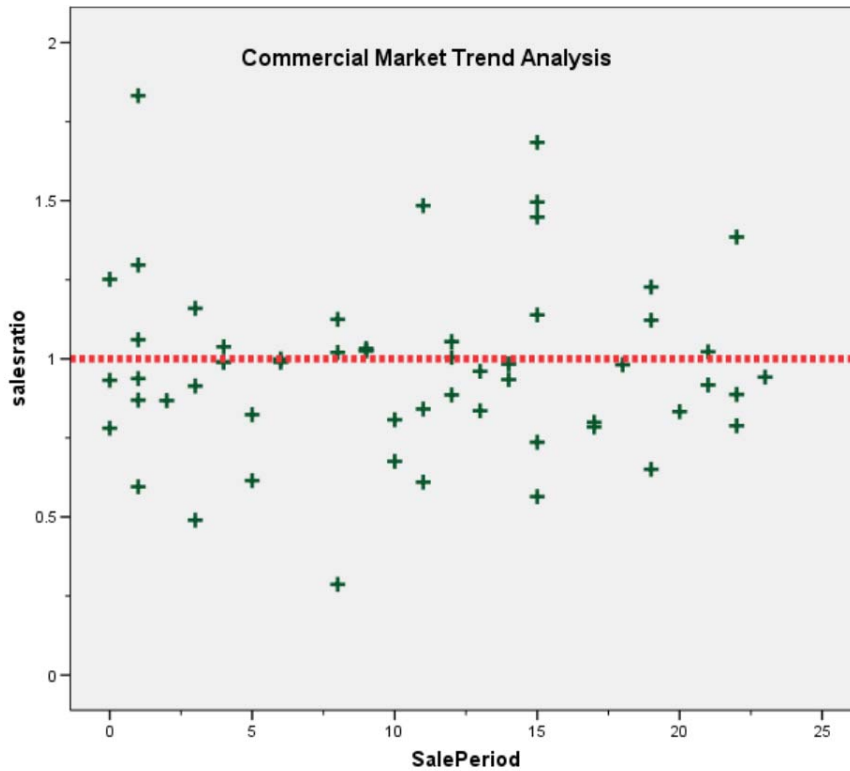
There was no residual market trending present in the commercial sale ratios. We concluded that the assessor has adequately considered market trending adjustments as part of the commercial/industrial valuation.

Sold/Unsold Analysis

We compared the median actual change in value between 2012 and 2013 for sold and unsold commercial/industrial properties to determine if sold and unsold properties were valued consistently, as follows:

Econarea	Group	N	Median Chg Vl	Mean Chg Val
1	Unsold	2629	1.0164	1.0283
	Sold	57	1.0380	1.0758

The above results indicated sold and unsold commercial/industrial properties were valued consistently.

V. VACANT LAND SALE RESULTS

There were 139 qualified vacant land sales for the 18 month period prior to June 30, 2013. The sales ratio analysis was analyzed as follows:

Ratio Statistics for currInd / Vtasp	
Median	1.000
Price Related Differential	1.150
Coefficient of Dispersion	.185

The above ratio statistics were in compliance overall with the standards set forth by the Colorado State Board of Equalization (SBOE) for the overall vacant land sales. The following graphs describe further the sales ratio distribution for all of these properties:
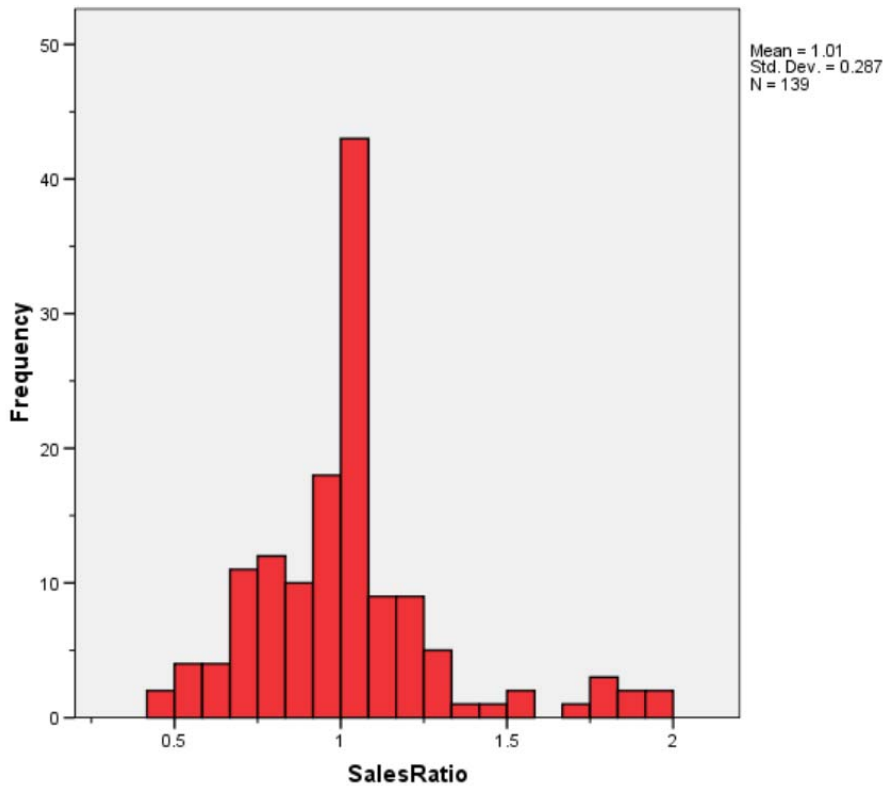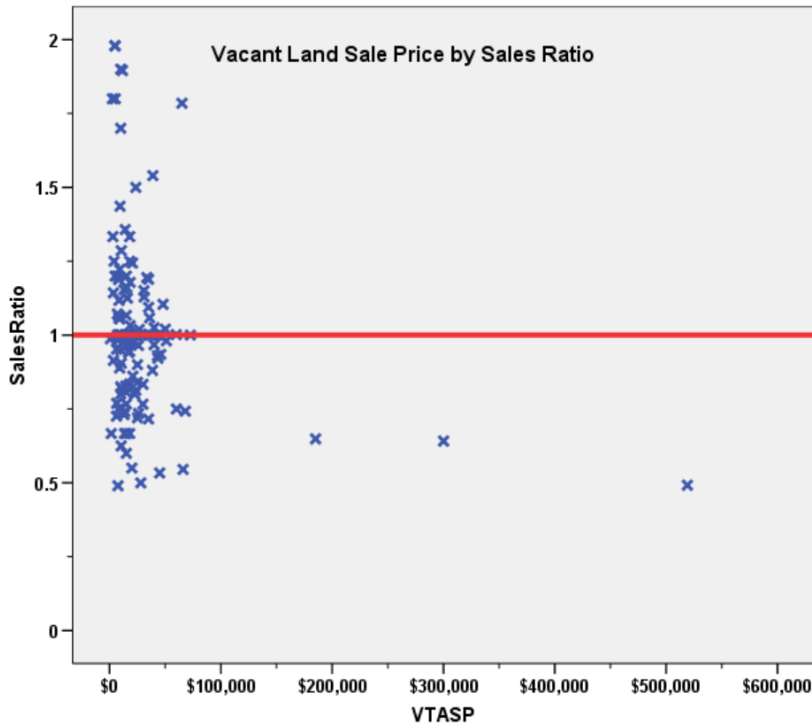
The above histogram indicates that the distribution of the vacant land sale ratios was within state mandated limits, while the above scatter plot indicated that there were no price related differential issues. No sales were trimmed.

Vacant Land Market Trend Analysis

We next analyzed the vacant land dataset using the 18-month sale period and stratified by economic area, with the following results:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.994	.052		19.249	.000
	VSalePeriod	.002	.005	.031	.363	.717

a. Dependent Variable: SalesRatio
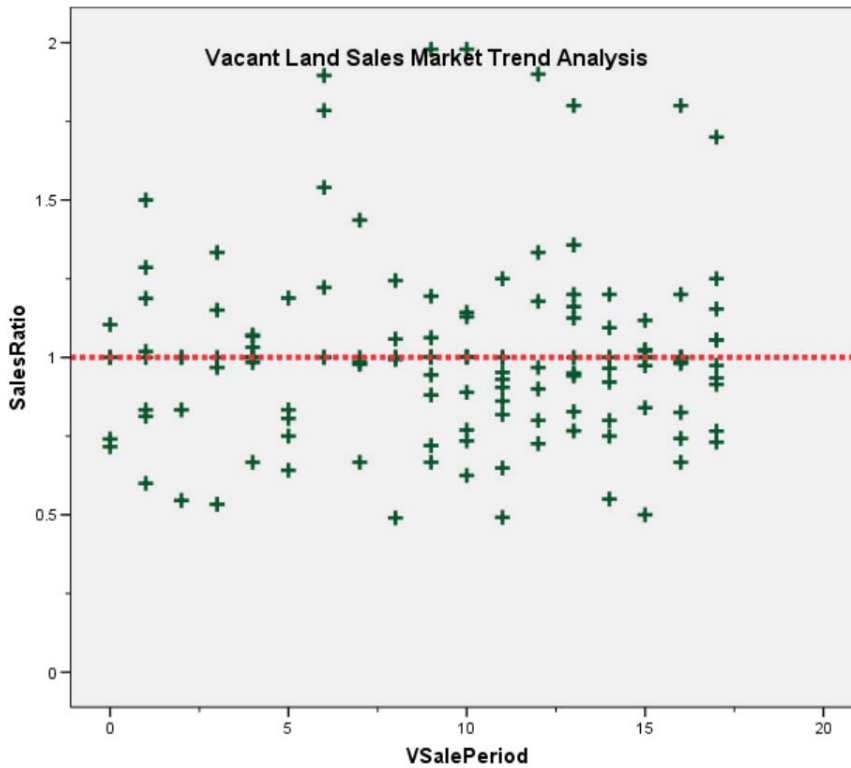
The above analysis indicated that no significant market trending was present in the vacant land sale data. We concluded that the assessor has adequately dealt with market trending for vacant land properties.

Sold/Unsold Analysis

In terms of the valuation consistency between sold and unsold vacant land properties, we compared the median change in value for 2012 and 2013 between each group, as follows:

Econarea	Group	N	Median Chg Vl	Mean Chg Val
1	**Unsold**	30,267	1.0000	.9306
	Sold	139	.8947	.9071

Overall, we concluded that the county assessor valued sold and unsold vacant land properties consistently.

V. AGRICULTURAL IMPROVEMENTS ANALYSIS

The final verification concerned the assigned actual values for agricultural residential improvements. We compared the median improved value per square foot rate for this subclass and compared it to the median improved value per square foot for residential single family improvements in Pueblo County, as follows:

Descriptives

ABSTRIMP			Statistic	Std. Error
Imp ValSF	**SFR**	Mean	$76.05	$.118
		95% Confidence Interval for Mean — Lower Bound	$75.82	
		95% Confidence Interval for Mean — Upper Bound	$76.28	
		5% Trimmed Mean	$75.65	
		Median	$75.56	
		Variance	725.496	
		Std. Deviation	$26.935	
		Minimum	$0	
		Maximum	$371	
		Range	$371	
		Interquartile Range	$41	
		Skewness	.243	.011
		Kurtosis	.243	.021
	Ag Res	Mean	$73.91	$1.837
		95% Confidence Interval for Mean — Lower Bound	$70.29	
		95% Confidence Interval for Mean — Upper Bound	$77.52	
		5% Trimmed Mean	$72.05	
		Median	$67.18	
		Variance	1123.566	
		Std. Deviation	$33.520	
		Minimum	$9	
		Maximum	$223	
		Range	$214	
		Interquartile Range	$44	
		Skewness	1.011	.134
		Kurtosis	1.760	.266

The above results indicate that agricultural residential properties were valued similarly to single family residential properties.

VI. CONCLUSIONS

Based on this 2013 audit statistical analysis for Pueblo County, residential, commercial industrial, vacant land and agricultural residential properties were found to be in compliance with state guidelines. The commercial median ratio was barely in compliance after rounding.

STATISTICAL ABSTRACT
Residential

Ratio Statistics for Current Total / TASP

| econarea | 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	1.030	.975	1.085	.986	.937	1.094	97.3%	1.009	.961	1.057	1.020	.159	19.4%
10	1.035	1.009	1.061	1.009	.990	1.026	96.7%	1.026	1.001	1.050	1.009	.079	11.4%
11	1.085	1.038	1.132	1.041	1.025	1.093	97.6%	1.075	1.030	1.121	1.009	.088	13.3%
12	1.072	1.017	1.126	1.026	.978	1.135	97.3%	1.053	1.003	1.102	1.018	.150	18.4%
13	1.033	1.008	1.059	1.002	.984	1.034	96.7%	1.017	.996	1.039	1.016	.104	14.0%
2	1.062	1.036	1.088	1.020	.998	1.040	95.5%	1.042	1.018	1.066	1.019	.115	15.5%
3	1.063	1.038	1.089	1.030	1.010	1.063	96.4%	1.038	1.012	1.063	1.025	.130	17.1%
4	1.031	.990	1.073	1.007	.942	1.089	97.3%	1.013	.972	1.054	1.018	.124	14.6%
5	1.028	1.003	1.052	1.006	.972	1.045	95.1%	1.002	.978	1.025	1.026	.132	16.7%
6	1.048	1.027	1.069	1.030	1.013	1.047	95.1%	1.034	1.017	1.052	1.013	.088	12.2%
7	1.058	1.036	1.080	1.027	1.014	1.054	96.0%	1.046	1.028	1.065	1.011	.102	13.6%
8	1.059	1.043	1.075	1.021	1.005	1.029	95.1%	1.031	1.014	1.047	1.027	.115	15.4%
9	1.043	1.019	1.067	1.007	.992	1.035	95.8%	1.022	1.000	1.044	1.021	.116	15.6%

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.

Commercial Land

Ratio Statistics for Current Total / 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
.972	.898	1.047	.960	.886	1.020	96.7%	.959	.886	1.031	1.014	.206	28.8%

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 Current Land / 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
1.011	.963	1.059	1.000	.984	1.000	95.9%	.879	.760	.999	1.150	.185	28.4%

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	10	.5%
	$25K to $50K	101	5.5%
	$50K to $100K	490	26.4%
	$100K to $150K	627	33.8%
	$150K to $200K	372	20.1%
	$200K to $300K	207	11.2%
	$300K to $500K	38	2.1%
	$500K to $750K	6	.3%
	$750K to $1,000K	2	.1%
Overall		1853	100.0%
Excluded		0	
Total		1853	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.274	1.002	.150	18.3%
$25K to $50K	1.148	1.002	.149	17.9%
$50K to $100K	1.049	1.001	.142	19.3%
$100K to $150K	1.025	1.001	.103	13.8%
$150K to $200K	1.011	1.000	.085	11.9%
$200K to $300K	.985	1.001	.080	10.4%
$300K to $500K	.973	1.000	.097	13.4%
$500K to $750K	.990	1.004	.064	9.2%
$750K to $1,000K	.779	.999	.042	6.0%
Overall	1.020	1.019	.115	16.0%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1212	1805	97.4%
	1225	1	.1%
	1230	47	2.5%
Overall		1853	100.0%
Excluded		0	
Total		1853	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1212	1.020	1.019	.116	16.1%
1225	.946	1.000	.000	.%
1230	1.039	1.017	.087	13.8%
Overall	1.020	1.019	.115	16.0%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	87	4.7%
	75 to 100	91	4.9%
	50 to 75	379	20.5%
	25 to 50	386	20.8%
	5 to 25	840	45.3%
	5 or Newer	70	3.8%
Overall		1853	100.0%
Excluded		0	
Total		1853	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation - Median Centered
Over 100	1.007	1.029	.136	18.0%
75 to 100	.968	1.009	.138	18.2%
50 to 75	1.014	1.019	.135	18.0%
25 to 50	1.035	1.023	.113	16.6%
5 to 25	1.018	1.020	.104	14.7%
5 or Newer	1.020	1.017	.081	10.3%
Overall	1.020	1.019	.115	16.0%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	2	.1%
	500 to 1,000 sf	354	19.1%
	1,000 to 1,500 sf	805	43.4%
	1,500 to 2,000 sf	473	25.5%
	2,000 to 3,000 sf	190	10.3%
	3,000 sf or Higher	29	1.6%
Overall		1853	100.0%
Excluded		0	
Total		1853	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.937	1.010	.054	7.6%
500 to 1,000 sf	1.011	1.021	.133	18.9%
1,000 to 1,500 sf	1.026	1.016	.114	15.7%
1,500 to 2,000 sf	1.014	1.019	.108	15.1%
2,000 to 3,000 sf	1.021	1.019	.102	14.6%
3,000 sf or Higher	1.019	1.041	.107	13.7%
Overall	1.020	1.019	.115	16.0%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	0	1	.1%
	1	129	7.0%
	2	1615	87.2%
	3	34	1.8%
	4	4	.2%
	9	70	3.8%
Overall		1853	100.0%
Excluded		0	
Total		1853	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.987	1.000	.000	.%
1	.979	1.032	.160	20.9%
2	1.023	1.019	.110	15.4%
3	1.027	1.020	.087	12.1%
4	.863	1.099	.190	30.7%
9	1.010	1.037	.149	21.4%
Overall	1.020	1.019	.115	16.0%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	0	1	.1%
	1	129	7.0%
	2	1615	87.2%
	3	34	1.8%
	4	4	.2%
	9	70	3.8%
Overall		1853	100.0%
Excluded		0	
Total		1853	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
0	.987	1.000	.000	.%
1	.979	1.032	.160	20.9%
2	1.023	1.019	.110	15.4%
3	1.027	1.020	.087	12.1%
4	.863	1.099	.190	30.7%
9	1.010	1.037	.149	21.4%
Overall	1.020	1.019	.115	16.0%

Commercial Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	1	1.8%
	$25K to $50K	3	5.3%
	$50K to $100K	12	21.1%
	$100K to $150K	12	21.1%
	$150K to $200K	9	15.8%
	$200K to $300K	11	19.3%
	$300K to $500K	4	7.0%
	$500K to $750K	3	5.3%
	$750K to $1,000K	1	1.8%
	Over $1,000K	1	1.8%
Overall		57	100.0%
Excluded		0	
Total		57	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.684	1.000	.000	.%
$25K to $50K	.981	.995	.107	16.1%
$50K to $100K	.923	1.026	.189	27.8%
$100K to $150K	.926	.997	.279	41.2%
$150K to $200K	.942	1.008	.214	29.7%
$200K to $300K	.983	1.008	.138	21.8%
$300K to $500K	.863	1.005	.211	25.5%
$500K to $750K	.989	.973	.169	35.7%
$750K to $1,000K	1.160	1.000	.000	.%
Over $1,000K	1.054	1.000	.000	.%
Overall	.960	1.014	.206	29.1%

Subclass

Case Processing Summary

		Count	Percent
ABSTRIMP	1718	1	1.8%
	2212	12	21.1%
	2220	9	15.8%
	2230	19	33.3%
	2235	3	5.3%
	2245	6	10.5%
	3212	5	8.8%
	3215	2	3.5%
Overall		57	100.0%
Excluded		0	
Total		57	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1718	.807	1.000	.000	.%
2212	.971	1.035	.209	31.2%
2220	.989	.963	.093	13.0%
2230	.836	.979	.208	29.4%
2235	.780	1.082	.294	47.0%
2245	1.026	1.003	.024	4.6%
3212	.983	1.250	.254	36.1%
3215	1.658	1.029	.105	14.8%
Overall	.960	1.014	.206	29.1%

Improvement Age

Case Processing Summary

		Count	Percent
AgeRec	Over 100	7	12.3%
	75 to 100	2	3.5%
	50 to 75	9	15.8%
	25 to 50	21	36.8%
	5 to 25	12	21.1%
	5 or Newer	6	10.5%
Overall		57	100.0%
Excluded		0	
Total		57	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
Over 100	1.022	1.074	.186	29.7%
75 to 100	.724	1.060	.151	21.3%
50 to 75	.784	1.022	.340	55.1%
25 to 50	.932	.966	.166	22.6%
5 to 25	.963	1.066	.196	28.2%
5 or Newer	1.029	1.025	.092	18.7%
Overall	.960	1.014	.206	29.1%

Improved Area

Case Processing Summary

		Count	Percent
ImpSFRec	LE 500 sf	1	1.8%
	500 to 1,000 sf	2	3.5%
	1,000 to 1,500 sf	1	1.8%
	1,500 to 2,000 sf	1	1.8%
	2,000 to 3,000 sf	12	21.1%
	3,000 sf or Higher	40	70.2%
Overall		57	100.0%
Excluded		0	
Total		57	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LE 500 sf	.807	1.000	.000	.%
500 to 1,000 sf	.985	2.302	.709	100.3%
1,000 to 1,500 sf	1.139	1.000	.000	.%
1,500 to 2,000 sf	.823	1.000	.000	.%
2,000 to 3,000 sf	.886	1.023	.176	22.8%
3,000 sf or Higher	.986	1.020	.188	27.2%
Overall	.960	1.014	.206	29.1%

Improvement Quality

Case Processing Summary

		Count	Percent
QUALITY	1	13	22.8%
	2	44	77.2%
Overall		57	100.0%
Excluded		0	
Total		57	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1	.836	1.078	.362	44.5%
2	.971	1.010	.169	25.7%
Overall	.960	1.014	.206	29.1%

Improvement Condition

Case Processing Summary

		Count	Percent
CONDITION	1	13	22.8%
	2	44	77.2%
Overall		57	100.0%
Excluded		0	
Total		57	

Ratio Statistics for Current Total / TASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
1	.836	1.078	.362	44.5%
2	.971	1.010	.169	25.7%
Overall	.960	1.014	.206	29.1%

Vacant Land Median Ratio Stratification

Sale Price

Case Processing Summary

		Count	Percent
SPRec	LT $25K	99	71.2%
	$25K to $50K	30	21.6%
	$50K to $100K	7	5.0%
	$150K to $200K	1	.7%
	$200K to $300K	1	.7%
	$500K to $750K	1	.7%
Overall		139	100.0%
Excluded		0	
Total		139	

Ratio Statistics for Current Land / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
LT $25K	1.000	1.035	.190	29.9%
$25K to $50K	1.000	.996	.128	20.0%
$50K to $100K	.980	1.000	.255	40.5%
$150K to $200K	.649	1.000	.000	.%
$200K to $300K	.641	1.000	.000	.%
$500K to $750K	.492	1.000	.000	.%
Overall	1.000	1.150	.185	28.8%

Subclass

Case Processing Summary

		Count	Percent
abstrInd	100	45	32.4%
	200	7	5.0%
	300	1	.7%
	550	1	.7%
	560	1	.7%
	1112	81	58.3%
	1135	1	.7%
	2112	1	.7%
	2130	1	.7%
Overall		139	100.0%
Excluded		0	
Total		139	

Ratio Statistics for Current Land / VTASP

Group	Median	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation — Median Centered
100	1.000	1.056	.172	28.3%
200	.984	1.014	.265	41.7%
300	.993	1.000	.000	.%
550	.500	1.000	.000	.%
560	.806	1.000	.000	.%
1112	1.000	1.050	.176	27.7%
1135	1.286	1.000	.000	.%
2112	.641	1.000	.000	.%
2130	.492	1.000	.000	.%
Overall	1.000	1.150	.185	28.8%